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1800

THE

FARMER'S MAGAZINE:

A

PERIODICAL WORK,

EXCLUSIVELY DEVOTED TO

AGRICULTURE,

AND

RURAL AFFAIRS:

1801.

Ye gen'rous Britons, venerate the PLOUGH,
And o'er your hills, and long withdrawing vales,
Let Autumn spread her treasures to the Sun. THOMSON.

THIRD EDITION.

VOL. II.

Edinburgh:

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1802.

TO

HIS GRACE

THE

DUKE OF BEDFORD,

MY LORD,

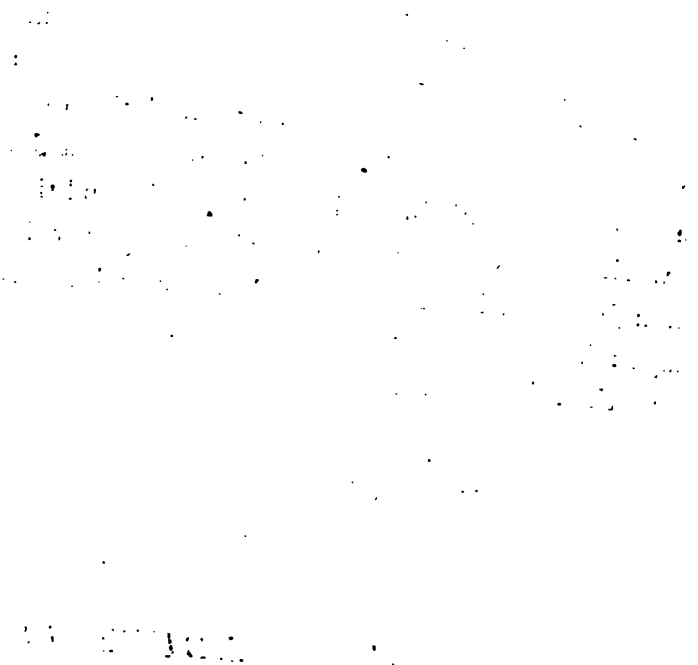
THE distinguished attention paid by your GRACE to the Improvement of BRITISH AGRICULTURE, added to the correct knowledge you have acquired in many of its most important branches, lead the Conductors of the FARMER'S MAGAZINE to hope that the present dedication will not be unacceptable, and that a work devoted solely to rural affairs, will not be thought unworthy of your GRACE's notice and patronage: With sentiments of the greatest respect, we have the honour to be,

YOUR GRACE'S

FAITHFUL AND OBEDIENT SERVANTS,

THE CONDUCTORS,

NOVEMBER 1801.



THE FARMER's MAGAZINE:

MONDAY, 12. JANUARY 1801.

(No. V.)

PART I.

ORIGINAL COMMUNICATIONS.

FOR THE FARMER'S MAGAZINE.

Thoughts on various Subjects.

THE high price of proviſions, and particularly of bread-corn, for ſome years paſt, in Britain, has not only produced a great deal of real diſtreſs among the middling and lower ranks of people, but an officiouſneſs in the endeavour to obviate the conſequences to trade and manufactures, that, if not duly regulated by the State, may be attended with effects fatal to the country and nation. Sir James Stewart, in his Eſſay on the Principles of Political Economy, and Dr Adam Smith, in his Eſſay on the Cauſes of the Wealth of Nations, have clearly and familiarly explained the principles on which prices of every kind of goods depend. The particular ſubject relative to corn, was ably diſcuſſed by another gentleman of the name of Smith, in the years 1765-6, when the conſideration of dearth was before an open Committee of the Houſe of Commons. And the writer of the Introduction to the Agricultural Reports, in your laſt Magazine, has very properly guarded the uninformed public againſt the prejudices formed concerning this ſubject. Several papers to the ſame uſeful purpoſe have been circulated in England; but

the letters of the Duke of Portland to the Mayor of Not tingham, and to the Duke of Marlborough, as Lord Lieute nant of Oxfordſhire, have probably made a greater impreſ ſion than any other, as coming from the department of Ad miniſtration. Theſe letters have evidently been compoſed b Lord Liverpool, or ſome man of real knowledge and expe rience in political economy. The real jib of the buſineſs however, lies much deeper, and may be properly conſidere in the following manner: The mercantile and manufactur ing intereſt in Britain having, for more than half a centur paſt, taken the lead in the nation, every method has bee uſed to keep down the prices of the immediate neceſſaries o life, and to keep the prices of labour as low as poſſible; *bu the immenſe and ſudden increaſe of the circulating medium o wealth in Britain, ſince the commencement of the fatal Ameri can war, and ſtill more by the preſent war of the French Re volution*, has ſo much depreciated the value of the ſigns o wealth, that no invention could obviate the prices of bread corn, and the other immediate neceſſaries of life, from com ing to the general level of other commodities; while the re wards of labour, not being regulated ſyſtematically, by thei relation to the fluctuating prices of proviſions, a great pre ſent inconvenience has ariſen, and a great complaint. If tw ſucceeding crops in Britain have been a third and a fourth part deficient, as has been ſaid; then the prices to the growe ought to be proportionally increaſed; but what exceeds thei price, muſt be imputed *to the depreciation of money*. Bee and mutton are now 5d. and 6d. per pound, formerly 2½d and 3d. per pound; and bread is not more than proportion ally dear, even at its preſent high rate, if the deficiency (par ticularly) of crop, be taken into conſideration. Corn, an even rice, are bulky articles, which, if brought from fo reign markets, cannot be ſold in Britain cheaper than th growth of our own country; and if complaints among th people are to be removed on juſt political principles, it ca only be by the legal eſtabliſhment of a proportion betwee work performed, and wages of labour beſtowed; a matter of conſiderable difficulty to arrange, without diſturbing th operations of political economy, and perhaps the peace o ſociety.

If the wages of labour are rendered adequate to the de preciation of the circulating medium, all cauſe of murmu would or ought to be removed from among the middling an lower claſs of people; and, as almoſt every ſpecies of labou

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is capable of being rendered piece-work, tables of the wages of labour might certainly be legally and juſtly formed, to regulate them according to exiſting circumſtances: But, do what we will in Britain, I am afraid, the great load of public debt, and conſequent depreciation of the value of money, muſt gradually ſtrip us of our markets for goods of home-manufacture, and bring foreign nations into competition with us in all our departments. I am alſo of opinion, that the late tax on income has already had a great effect to diminiſh the capital of country gentlemen and others, who uſed to employ many of the poorer claſs, who could not make their way by piece-work, but were ſuccoured and kept off the poor's rates, by proper employment ſuited to their abilities. I flatter myſelf, from the papers of the Duke of Portland, that Parliament, or rather Miniſters, are not inclined to uſe any empirical and arbitrary means of remedying the preſent uneaſineſs among the people; for, if they do, I am perſuaded the whole ſyſtem of public policy would be convulſed, and finally deſtroyed.

There are at preſent above half a million of unproductive citizens—or ſubjects, I ſhould rather ſay—of Britain, in the two iſlands, which, being about an eighth of the whole adults in the kingdom, are thrice as many, at leaſt, as the nation can afford to maintain in that ſituation; ſo that I am perfectly convinced, upon undeniable principles of policy, that this, with the combination of circumſtances to which I have alluded, muſt very ſoon produce conſequences that are paſt all calculation of evil.

Are not the poor's rates a great means of decreaſing the induſtry and economy of the lower ranks, and would not Benefit-Societies for widows and orphans, under legal authority, be a means of obviating this growing evil, and of increaſing laudable induſtry?

Is not the great increaſe of diſtreſs among the lower ranks, in a great degree owing to the great demand for butcher-meat, which has ſo univerſally increaſed the expence of maintenance, and thrown ſo much more land into paſture? Is it not probable, alſo, notwithſtanding the calculation of *Price*, the political arithmetician, that the population of Britain has increaſed within theſe thirty or forty years; as it ſeems pretty well aſcertained, that it has done ſo in Scotland, from the compariſon between Webſter's Reports, and thoſe given in to Sir John Sinclair?

Upon the whole, I am of opinion, that encouragement held forth to the cultivators of land, and the cultivation eſpecially

of new lands, waſte, or held in common, the protection of markets, and dealers of every deſcription, and the promotion of ſuperior induſtry and *economy*, are the only probable means of averting the preſent impending danger, ariſing from the preſent high prices of the neceſſaries of life in Great Britain.

Nov. 2. B——

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

The following communication, upon a very important ſubject, was put into my hand by Sir John Sinclair, with a requeſt that it might be inſerted in the next Number of your Magazine. The preſent attempt, it is to be hoped, is the dawning of a ſyſtem, that promiſes advantages of the firſt magnitude to the Agriculture of the North of Scotland. Mr Traill, the Sheriff of Caithneſs, who drew up the Reſolutions, and the gentlemen of that county, ſeem to have juſt views of the ſubject, and to be actuated by that ſpirit which alone can inſure ſucceſs to any plan that can be propoſed, either for rectifying exiſting abuſes, or introducing valuable improvements. It were to be wiſhed, that the ſame ſpirit pervaded the gentlemen of every other diſtrict in the kingdom: the obſtinacy and ignorance of tenants would then no longer be mentioned as a bar to improvements. I am, &c.

A. Z.

Reſolutions of the County of Caithneſs, regarding the Caſting of Feal and Divot, Winter Herding, &c.

At Wick, the 30th day of September 1800.

At a Meeting of the Heritors of the County of Caithneſs,

Preſent,

Sir JOHN SINCLAIR of Ulbſter, Bart.
JAMES TRAIL Eſq. of Hobbiſter.
J. CAMPB. SUTHERLAND Eſq. Forſe.
JOHN SINCLAIR Eſq. of Barrock.
JAMES SINCLAIR Eſq. of Forſe.
WILLIAM SINCLAIR Eſq. Freſwick.
JOHN HORNE Eſq. of Stircock.
GEORGE SUTHERLAND Eſq. Brabſter.
DAVID BRODIE Eſq. of Hopeville.
JOHN GORDON Eſq. of Swinzie.

Sir

Sir JOHN SINCLAIR *was choſen Preſes.*

THERE was read to the Meeting, a Letter from James Trail, Eſq. addreſſed to the Heritors of the county, on the means of promoting the Agricultural Intereſts of the County, accompanied with Reſolutions drawn up by him, for the purpoſe of enforcing the ſame. The Meeting, having conſidered the ſame, are unanimouſly of opinion, That the meaſures ſuggeſted by the ſaid James Trail, Eſq. are entitled to their warmeſt approbation and ſupport. The ſaid Reſolutions having been immediately ſubſcribed by the Heritors preſent, it was reſolved, that the ſaid Letter and Reſolutions be printed at the expence of the ſubſcribers, and that Mr Trail be requeſted to circulate the ſame.

The Meeting then unanimouſly reſolved to return their thanks to Mr Trail, for having brought forward ſo uſeful a meaſure, and for his uniform attention to promote the intereſts and improvement of the county. JOHN SINCLAIR.

Letter addreſſed to the Heritors of the County of Caithneſs, by James Trail, Eſq. Sheriff of the County.

Gentlemen,

THE practice, which has ſo long prevailed in this county, of cutting up the ſurface of the commons and outfield-grounds, for turf, feal, and divot, and the ſhameful devaſtation that has been the conſequence thereof, cannot have eſcaped the obſervation of any of you.

It is a great and a growing evil: For as no means are uſed for reſtoring the ſurface thus pillaged, and as nature does not ſupply the waſte, you muſt at once perceive, that the unavoidable conſequence of perſiſting in this practice, muſt be, the ultimate deſtruction of all the outfield and common paſture grounds, in order to ſupport that ſmall proportion of the ſoil now under tillage.

It ſurely deſerves conſideration, whether a practice, ſo deſtructive to the ſurface of the country, and ſo hoſtile to every ſcheme of future improvement, is itſelf neceſſary; or whether, in ſome degree at leaſt, it does not derive its ſupport from the mere ſanction of eſtabliſhed uſage, and from a ſlovenly ſyſtem of management. Some of you may recollect, that laſt year this ſubject was brought forward at a public meeting of the gentlemen of this county. Its importance was univerſally admitted; and the remedy then ſuggeſted, and adopted, was, by application to the Highland Society, to take it up

as a matter of general intereſt to the Highlands of Scotland. Although I did not diſapprove of that meaſure, yet it then occurred to me, that we were taking a very circuitous way of obtaining the end; for that, if we were really ſerious in the buſineſs, we had much in our own power, without Legiſlative interference. I believe the matter was conſidered in the ſame view by that reſpectable and public-ſpirited body; and therefore, it now reſts with you to ſay, whether the idea ſhall drop here; or, if you will ſhow yourſelves in earneſt on the ſubject of laſt year's reſolutions, by taking ſuch means as are within your reach, for the accompliſhment of the object.

That thoſe means, if judiciouſly taken, and ſteadily purſued, will prove effectual, I cannot entertain a doubt. But as I conceive the firſt ſtep towards a cure, to be a thorough conviction of the certainty and reality of the evil; and as many perſons, who are in other reſpects enemies to the practice, may conceive it to be juſtifiable, upon the argument of neceſſity; it may not be improper to offer a few conſiderations upon that ſubject.

The neceſſity of the practice, then, will beſt appear, by conſidering, in the *firſt* place, What advantages are derived from the preſent ſyſtem: *2dly*, Whther theſe advantages can be obtained by other, and leſs unexceptionable means: And, *laſtly*, If they cannot, how far it may, nevertheleſs, be expedient to *aboliſh or reſtrain the uſage*, as one which, under the ſemblance of *preſent benefit*, is imperceptibly cutting off the poſſibility of *future improvement*.

1ſt, then, In conſidering the advantages or conveniences derived from the preſent ſyſtem, it will be proper to remark the ſeveral uſes to which theſe depredations upon the commons are applied: theſe are, Fuel, Buildings, and Manure.—Fuel is unqueſtionably to be conſidered as one of the neceſſaries of life. Eaſy acceſs to it, is to every farmer a matter of very eſſential conſequence. But as moſſes every where abound in this county, and ſeldom at any great diſtance from the cultivated grounds, it appears no great hardſhip to reſtrain the tenantry to the uſe of moſs for fuel. The cutting up of turf, or ſpade-peats, from the clay or earthen ſurfaces of the paſturage, is ſurely no matter of neceſſity, but merely a ſyſtem of ſlovenly economy, to ſave a more diſtant carriage.

To the tenant, this is a matter of little importance, as his intereſt in the lands is but temporary; and when he has pillaged

laged the whole ſurface of the common ſurrounding his preſent farm, he has only to remove to another, and repeat the ſame theft; but, to the landlord, who has a permanent intereſt in the preſervation of his property from waſte, it is a moſt ſerious evil.

Secondly, As to the uſe of feal and divot for buildings, there is more difficulty; for, in the preſent ſtate of population in this county, the expence of erecting buildings of ſtone, covered with ſlate, for the accommodation of all the tenants and cottagers, would be altogether inſupportable. I am, therefore, inclined to think, that the uſe of feal and divot for buildings muſt be ſubmitted to, under a limited extent, until, by the gradual and progreſſive improvement of farm houſes, it ſhall become leſs neceſſary.

But, farther, with reſpect to *manure*, the chief purpoſe for which the ſurface of the ground is cut up, it is clear that this is not to be juſtified upon the principle of neceſſity; becauſe, in every country where improvement has been carried to any extent, it is altogether unknown; and, in many of the beſt cultivated farms, even of this county, it has been long laid aſide. And, permit me to add, that the abolition of it, however harſh it may be to old-faſhioned farmers, will neceſſarily introduce a ſyſtem of management more beneficial both to themſelves and their landlords. The want of feal for manure, will conſtrain them to reſort to other means of ſupplying the defect. They will ſoon diſcover the neceſſity and advantage of houſing their horſes and cattle in the nighttime, by which means an infinite ſaving will be made in the loſs of ſtock, to which the preſent ſyſtem is ſubject.

This neceſſity, again, of houſing their ſtock, will irreſiſtibly lead them to try every means of increaſing the quantity of provender, by the cultivation of turnips and artificial graſſes.

This idea, to many, may appear chimerical; and, certainly, to farmers who are riveted in ancient prejudices, it will appear in no other light. But, with confidence, I ſubmit it to the judgment of every gentleman acquainted with the ſtate of huſbandry in this county, whether the loſſes, ſuſtained in the death of horſes and cattle alone, by bad management, and eſpecially by colds contracted in the autumnal ſeaſon, does not amount to a very heavy charge upon the preſent ſyſtem.

The tenants may tell you, they cannot afford to ſow graſs-ſeeds: They muſt cultivate grain alone, as the means of enabling them to pay their rents. The obvious anſwer is, that the ſyſtem recommended will be found to ſave the money

which they continually expend in renewing their *ſtock*, and, of courſe, enable them to pay their rents with more facility. —But,

3*dly*, Even if it were otherwiſe—if it ſhould be neceſſary to add ſome encouragement to induce the tenantry to break off the preſent ſyſtem, and to adopt the one recommended; it certainly will be much for the advantage of the landlords to enforce it, even at this expence.

They will preſently ſee their eſtates riſe in value, from an improved cultivation; and the ultimate benefit is incalculable. Thoſe very waſtes, which are now preyed upon, as the means of ſupporting an erroneous ſyſtem, will ſoon be brought into tillage themſelves. The farmers, having thrown a conſiderable portion of their good arable land into graſs, and having by that means, and by the houſing of their cattle, greatly increaſed their ſtock of manure, will find themſelves in a ſituation to improve from the commons; and thus their diſpoſition to enlarge the field of their arable land, will be exerted, to the mutual benefit of themſelves and their landlords. Thus it is, that, in a ſyſtem of good huſbandry, the different parts are mutually ſubſervient to each other, and all of them conſpire in promoting general improvement; whereas, in one that is imperfect, ſome *great* and *neceſſary ſacrifice* is continually made for upholding it.

I truſt, it will not appear preſumptuous in me, to have ſolicited the attention of the Gentlemen of this county to an object of ſuch magnitude, and that I ſhall be acquitted of any other motive in the buſineſs, than a deſire to promote their nefit, and the general improvement of the county.

Intimately and eſſentially connected with the ſubject of which I have been treating, is, the neceſſity of enforcing Winter herding.

My ideas of both I have taken the liberty of throwing together, in the ſhape of Reſolutions, for the conſideration of the Gentlemen of the county, together with a reſolution regarding petty thefts on the property of the farmer; the propriety of puniſhing which requires not to be dwelt on: And if any of the hints thrown out ſhall, under their correction and patronage, become the means of advancing the intereſts of agriculture amongſt us, I ſhall find abundant gratification.

I have the honour to be, Gentlemen, your moſt obedient and moſt humble ſervant,

JAMES TRAIL.

Caithneſs, 29th Sept. 1800.

Wick,

Wick, 30th September 1800.

Reſolutions of a Society, inſtituted for promoting the Agricultural Intereſts of the County of Caithneſs.

THE ſubſcribing heritors of the county of Caithneſs, having taken into their ſerious conſideration, the State of Agriculture in the ſaid county, and being ſolicitous to remove every obſtacle that retards its improvement, or diſcourages cultivation and induſtry therein, have come to the following Reſolutions:

1*mo*, That the continued ravages which are made upon the common, or outfield paſtures, for the purpoſe of ſupplying turf, feal, and divot, are an intolerable abuſe, which it behoves every proprietor, looking to the intereſt of his own poſterity, or the future improvement of the county, to correct and reſtrain, by every means in his power.

2*do*, That the eſtabliſhment of Winter-herding, is eſſential to every ſcheme of improved huſbandry, being the only means, whereby ſown graſs and green crops can be preſerved in an open country.

3*tio*, That petty theſts—in particular, the ſtealing of grain, ſtraw, graſs, hay, turnips, potatoes, and other agricultural productions; alſo cattle, ſheep, and other ſtock; are ſo prejudicial to the intereſt of the farmer, and of the public, that every exertion ſhould be made, by rewards and otherwiſe, to find out the perpetrators of ſuch crimes, and to have them puniſhed in the moſt exemplary manner.

4*to*, That, in conformity with the aforeſaid general reſolutions, the ſubſcribing proprietors do form themſelves into a Society, for the purpoſe of regulating the uſe and conſumption of turf, feal, and divot, upon their eſtates; eſtabliſhing and enforcing Winter-herding; and for defraying the expence of proſecuting offenders, againſt the property of the farmer.

5*to*, That the uſe of turf for fuel, and feals for manure, be prohibited in the ſtricteſt manner, excepting within the precincts of the moſſes, the limits of which are to be particularly marked out, to prevent any miſapprehenſion on that head.

6*to*, That the uſe of feal and divot, for buildings, be permitted, in as far only as may be abſolutely neceſſary, and that every means be adopted to prevent the abuſe of it; and, in particular, that no feals or divots be cut, even for buildings,

ings, without a ſpecial permiſſion, in writing, from the proprietor, or his factor, expreſſing the number allowed, and the ground from which they may be taken.

7*mo*, That where any ground is poſſeſſed, in common, betwixt contiguous heritors, both parties do abſtain from the uſe of ſeal and divot upon ſuch commons, until they ſhall be divided.

8*vo*, That every public encouragement be held out for the improvement and cultivation of the waſte grounds, by aſſigning ſuitable portions thereof to ſuch of the tenants in the neighbourhood as are willing to undertake the improvement of them, agreeable to a plan to be laid down by the landlord; and by rewarding the induſtry of the tenant, by gratuitous leaſes of ſuch lands, or otherwiſe, as may be found moſt expedient.

9*no*, That, in order more effectually to eſtabliſh and enforce Winter-herding, each townſhip, or other convenient diſtrict, be required, at their joint expence, to ſupport and maintain a common herd; each individual tenant, or cottager, paying in proportion to his rent.

10*mo*, That, under the care of ſuch common herd, the horſes, cattle, ſheep, and ſwine, belonging to the townſhip or diſtrict, may be kept upon the outfield paſturage during the day-time, but are not to be ſuffered to go looſe within town-dikes at any ſeaſon of the year.

11*mo*, That cattle or horſes, intended to be left upon the common or outfield paſturage during the night, be either folded, or drove to ſuch a diſtance from the towns, as to ſecure againſt any treſpaſs; and that no ſheep or ſwine be kept in the open fields during the night, in any caſe whatever.

12*mo*, That, in order the more effectually to enforce theſe Regulations, and, at the ſame time, to draw the obvious advantages from them, it be made a ſtipulation in every agreement betwixt heritor and tenant, that the latter ſhall ſow a certain proportion of his arable land, not leſs than one twentieth part, with graſs ſeeds; and, for his encouragement to comply with this meaſure, the proprietor ſhall provide the neceſſary ſupply of hay ſeeds, from the beſt markets, to be given out to the tenants at prime-coſt, upon twelve months credit; and, in caſe the tenant cannot find a ſuitable market for his hay, the proprietor ſhall be bound to take all he chooſes to diſpenſe with, not exceeding the produce of the land which is to be ſown out, in conformity with this regulation, at the rate of 4d. per ſtone; it being, nevertheleſs, optional

optional to the tenant to keep it, or diſpoſe of it otherwiſe, if he ſhall ſo incline.

13*tio*, That the whole of the aforeſaid regulations be enforced from and after the term of Whitſunday next; and, for that purpoſe, that repeated publication be made of theſe Reſolutions at the ſeveral pariſh-churches of the county, ſo as to afford to the tenants and cottagers an opportunity of receiving further information from their landlords, with regard to the ſpirit and tendency of the meaſures recommended.

14*to*, That the Society, or as many of its Members as conveniently can, do meet at Thurſo upon the firſt Monday of May next, and thereafter, upon the firſt Monday of each month, for the purpoſe of enforcing theſe and ſuch other regulations as they may think it expedient to iſſue from time to time, for carrying the general reſolutions into effect; and to receive ſuch information, by way of complaint, or otherwiſe, as may be brought before them, touching any matter or thing done contrary hereto; which informations, when duly verified, ſhall be entered into a book to be kept for that purpoſe, with the name and deſignation of the offender, in order to proſecution, or that he may be otherwiſe dealt with, according to circumſtances; and that they appoint a public proſecutor, to inſtitute ſuch proceſſes as they may direct, before the ordinary, civil, or criminal courts.

15*to*, That whatever difficulties the Society may have to encounter in carrying theſe meaſures into effect, from prejudices and confirmed habits; yet being, on the moſt mature conſideration, fully convinced of the general expediency of the plan, and of the great advantages which, both to landlords and tenants, will be derived from a firm and ſteady perſeverance in it, they reſolve, and pledge themſelves to each other, and to the public, that they will rigidly adhere to the principles of it; and, in particular, that they will grant no written or verbal leaſes of their lands to any tenants, which ſhall not ſpecifically bind them to a compliance with all and each of the aforeſaid conditions: and when any individual is marked in the books of the Society, or otherwiſe convicted of a wilful breach of any of them, the proprietor, being a Member of this Society, ſhall be bound, in honour, to remove ſuch perſon from his eſtate at the firſt term; and no other Member of the Aſſociation ſhall receive him, as a tenant or indweller upon his property, for the ſpace of three years after ſuch removal.

FOR THE FARMER'S MAGAZINE.

Thoughts on Leaſes.

It is frequently diſputed, whether a farmer ought to be reſtricted to ſpecific crops, and a certain mode of cultivating his farm, or left to manage it according to his own diſcretion, and be only bound not to deteriorate the ground. This muſt vary, according to the advancement of improvements, and the knowledge and diſpoſitions of the farmers in that part of the country where the lands lye. The writer of this paper hath often diſcovered, from obſervation and experience, that the common farmers in the Weſt of Scotland, are generally unacquainted with the theoretical knowledge of farming; and, from hard labour, ſtraitened circumſtances, and contracted prejudices, they only move and perform as they are impelled, like a machine or implement of huſbandry. To rouſe the farmers to activity, to better their circumſtances, to make improvements popular, &c. landed gentlemen ſhould let out their farms at a moderate rent, for the firſt nine or ten years; and take the tenant ſtrictly bound, by his tack, to manure, labour, and ſow ſuch kinds of grain on certain fields in certain years, and the rent to riſe at fixed periods during the tack. Thus the tenant would be enabled to bring the farm into a proper condition for bearing crops; would be ſenſible of the advantage gained: The maſter would have his land meliorated; and, afterwards, the tenant would be capable to pay larger rents; and thereby both maſter and tenant would be profited; more grain brought into the market; and, a double or triple quantity being raiſed, proviſions might ſell at a cheaper rate, and the farmer ſtill a gainer. The cultivation and manuring would quicken the dormant earth; and the advantage reaped by the farmer would cauſe him think, and bring him into exertion and activity; more workmen might be employed, and the induſtrious poor better provided for. When once the farmer became ſkilled in, and favourable to, improvements and rotation of crops, he might then be left, in a great meaſure, to manage his farm in the way and manner which he found by experience to be moſt beneficial, and beſt adapted to the nature of the ſoil. By Weſt country farmers, even where the ſoil is deep and ſtrong, the farm divided and ſubdivided with ditch and hedge, and near to manure,

manure, little more is done, than ſpreading from ſixty to eighty bolls of ſlacked lime on each acre, before breaking up; ſowing the ſame, for two years, with oats, and the third either with oats or barley, and graſs ſeeds; laying on what dung happens to be in the dunghill at the time, taking one crop of hay, and afterwards letting it reſt five or eight years in paſture. Rotation of different crops, fallowing, ſummer-working, making and uſing compoſts, ſtraightening ridges, draining, irrigation, &c. weſt country farmers account fooliſh and unprofitable. Were a certain mode of cultivation laid down in their tacks, and theſe rules ſtrictly enforced, the advantage and gain ariſing from an approved mode, would open their eyes, ſet their genius to work, and give an ardency for information and agricultural improvements. They would thereby be inſtructed in the art and principles of huſbandry, as a profeſſional buſineſs; and daily practice would check errors, and falſe flights of fancy. In order to gain that end, the maſter, or his factor, ſhould have a thorough knowledge of farming, or conſult intelligent farmers, viſit the farm to be let in leaſe, conſider the condition it is to be left in by the outgoing tenant; the nature, powers, and qualities of the ſoil; its ſituation for water, roads, markets, and manures; then prepare a plain conciſe tack, with a comprehenſive table of cultivation. Thus the tenant, with little education and trouble, would, with a glance, ſee in what condition each incloſure muſt be; and miſmanagement and lawſuits, which often take place through ignorance of the tack, prevented. The form of a tack and table, which, in the writer's opinion, would anſwer the end, is here annexed. The table, however, muſt vary always according to the condition of, and agreed mode of cultivation ſuitable for, the farm.

J. W.

Ayrſhire, 23*d June* 1800.

Form of the Tack.

It is *contracted* and *agreed*, *between* A. B., heritable proprietor of the lands and others after mentioned, *on the one part*, *and* C. D. in —— *on the other part*, as follows: The ſaid A. B., upon the terms after ſpecified, *ſets* and *lets* to the ſaid C. D., and his heirs, ſecluding aſſignees, legal or voluntary, and ſubtenants, except with the maſter's conſent in

in writing, *all* and *whole*—(here inſert the name, extent, and boundaries of the farm)—for eighteen years, commencing for the crop and year 1801: *Reſerving* to the maſter, and his ſucceſſors, full power to try for, work, manufacture, and carry away, lime, coal, ſtone, marl, metals, minerals, foſſils, and manures of every deſcription, in the ſaid lands; to erect neceſſary buildings and machinery for that purpoſe; to ſet off, incloſe, and plant verges, belts, clumps, angles, and braes, fence and incloſe the ſame, plant trees alongſt the fences, and around the yards of the farm; to repair or ſtraighten old roads, and to make and uſe new roads, and to dig for, and take gravel and ſtones for the ſame; and to make exchanges of parts of the ſaid lands for other parts of adjacent farms, for ſtraightening dikes and marches, or rendering incloſures more commodious; the tenant getting allowance from his rents, for the ground which he may thereby be deprived of, or paying the maſter for the additional ground the tenant may acquire by exchanges, in proportion to the rents and value thereof, as the ſame ſhall be aſcertained by two ſkilful men, to be mutually choſen by the parties: *Declaring* always, that, upon the bankruptcy of the ſaid C. D., this leaſe ſhall inſtantly expire; nor ſhall it thereafter be in the power of the ſaid C. D., directly or indirectly, to continue his poſſeſſion, either by himſelf, or by a manager, factor, or overſeer, for behoof of his creditors; *alſo declaring*, that heirs-portioners ſhall have no right of ſucceſſion in this leaſe, the eldeſt daughter always ſucceeding without diviſion; notwithſtanding whereof, the ſaid C. D. ſhall have power and liberty to appoint *any one* of his children, whether *ſon* or *daughter*, to ſucceed to him in this leaſe; *and* with and under the above mentioned reſervations, and with and under the conditions and obligations incumbent on the tenant, the ſaid A. B. *obliges* himſelf, and his ſucceſſors, *to warrant* this tack at all hands, according to law. *For which cauſes*, the ſaid C. D. *binds* and *obliges* himſelf, his heirs, executors, and ſucceſſors, to fulfil the whole obligations incumbent on the tenant by this tack; *and to pay* to the ſaid A. B., and his heirs or aſſignees, or to his or their factor or caſhier, for his or their behoof, the ſum of L. Sterling for the firſt years, the ſum of L. Sterling for the next years, and the ſum of L. Sterling, of fixed ſilver rent, yearly, during the remainder of the tack, at Lammas and Candlemas equally; beginning the firſt year's payment at Lammas 1801, and Candlemas thereafter, by equal portions, for the crop and year 1801, with intereſt of the ſaid

rent

rent after the ſame falls due, till payment—(here inſert any thing to be paid in kind to the maſter, aſtriction to the mill, if any be, public burdens, making drains, drawing, watching, or cutting dikes, and generally whatever the tenant is to pay or perform in kind). *Further*, the ſaid C. D. *binds* and *obliges* himſelf, and his foreſaids, to manage and cultivate, in a huſbandman-like manner, the ſaid farm and lands according to a particular table or mode of cultivating the ſaid farm, ſigned by the ſaid A. B. and C. D., of this date, as relative hereto, which is here held as particularly engroſſed, *brevitatis cauſa*: *And* it is hereby ſpecially *provided*, *declared* and *agreed* to, that if the ſaid C. D. ſhall, at any time, contravene, or fail to have the ſaid farm, or any part thereof, manured, laboured, and in crops ſpecified in ſaid table, whereby the ſame is infringed, in whole or in part, it ſhall, in the option of the maſter, be an *ipſo facto* irritancy of this leaſe; *and* he ſhall, in that caſe, have full power and liberty, by a charge hereon, or by an application to the judge-ordinary, and without any other declarator, ſummarily to remove and eject the tenant from the ſaid farm and lands, without any allowance, claim, or recourſe whatever, to the tenant; *otherwiſe*, the tenant ſhall be *bound* and *obliged to pay* to the ſaid A. B., or his foreſaids, an additional ſilver rent of pounds Sterling, for the whole foreſaid lands, beſides the fixed rents above mentioned; which additional rent ſhall not be penal, but *bona fide* conventional. *Further*, the tenant is to eat and conſume on the ſaid lands the whole ſtraw and fodder of the grains thereof, and to collect and preſerve, in proper dung-ſteads, the laſt year of the tack, the whole dung and ſulzie of the ſaid lands, and leave the ſame for the uſe of the proprietor or incoming tenant, without any allowance whatever, and ſhall not, at any time during the tack, overſtock the paſture-graſs with cattle; *alſo*, not to keep any ſheep or lambs on the ſaid farm; otherwiſe to pay the maſter, and his foreſaids, ſhillings for each ſheep or lamb which ſhall be found thereon, and for each time, of additional rent, beſides damages thereby incurred; *and* he hereby accepts of the houſes, dikes, and fences, upon the ſaid farm, in their preſent condition, *and obliges* himſelf to put the ſame in proper repair, and to keep the whole houſes, dikes, fences, gates, and gate-poſts, during the tack, and leave the ſame, at his removal therefrom, in ſufficient, tenantable, and fencible condition, he having, nevertheleſs, recourſe upon the proprietors and tenants of adjoining lands, for half of the expence of march-dikes. *And further*, the

ſaid

ſaid C. D. *obliges* himſelf, and his foreſaids, to flit and remove themſelves, with their wives, families, tenants, cottars, and dependants, and all their goods and gear, furth and from the arable lands of the ſaid farm, at Martinmas 1818, from the yards at Candlemas thereafter, and from the paſturage and houſes on the twelfth of May thereafter, without warning, overgiving, charge, or proceſs of removing, and excluding tacit relocation; *otherwiſe, to pay* to the ſaid A. B. and his foreſaids, pounds Sterling of additional rent for each year, or part of a year, that the tenant, or his foreſaids, ſhall poſſeſs the ſame after the expiry of the terms of removal, without a new agreement in writing with the maſter, and without prejudice to his removing the tenant, as accords: *Declaring*, that the ſtocking on the ſaid lands ſhall be always hypothecated for both fixed and additional rents, damages, and expences, if incurred. *And, laſtly*, both parties *bind* and *oblige* themſelves, and their foreſaids, to fulfil and implement their reſpective parts of the premiſes to each other, under the penalty of Sterling, to be paid by the party failing, to the party obſerving, or willing to obſerve, the ſame, beſides performance: *And they conſent to the regiſtration hereof*, and of the ſaid table or mode of cultivation, in the books of Council and Seſſion, or others competent, that letters of horning on ſix days, and other legal execution neceſſary, may paſs hereon, in form, as effeirs; and, for that purpoſe, they *conſtitute* their procurators, &c. In witneſs whereof, theſe preſents, written on this and the preceding pages of ſtamped paper, by *are ſubſcribed*, with a duplicate hereof, and duplicates of the table above referred to, all of this date, and relative hereto, by the ſaid A. B. and C. D. at this day of in the year eighteen hundred, before theſe witneſſes.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On Tithes.

GENTLEMEN,

WHILE I am ſincerely diſpoſed to pay reſpectful attention to the ingenious remarks of your correſpondent, *A Scots Farmer*, p. 396 of firſt volume, I can by no means admit that he takes up the ſubject in a proper manner. Without entering, however, upon the main queſtion, *viz.* the general

ral expediency of Tithes, which would lead me into a wide field, I propoſe to offer a few curſory obſervations upon what is ſaid reſpecting the manner in which this public burden affects the intereſt of the ſeveral parties.

Firſt, The intereſt of proprietors is affected by the payment of tithes, to a greater degree than the extent of the burden itſelf. This is allowed by your correſpondent, who attributes the deficiency of rent ſolely to the haraſſing and diſagreeable circumſtances attending a collection in kind. He is here ſo far in the right: but this loſs is trifling, when compared with that ſuſtained from the damp caſt upon improvements, by the operation of this tax. It is in this point of view, that proprietors are principally concerned in the aboliſhment of tithes, or, in other words, having them commuted into money, agreeable to their aſcertained value.

Secondly, It would undoubtedly give ſurpriſe to many of your readers, to ſee the clergy ranked as the party moſt intereſted in having tithes aboliſhed; and yet, from actual obſervation, I am convinced your correſpondent is correct. I muſt, however, call to his remembrance, that a very large proportion of tithes, in England, are the property of laymen; which is a circumſtance often neglected by our countrymen, when reaſoning on this ſubject. With theſe lay-impropriators, the arguments which weigh with both of us, will be conſidered as extraneous and irrelevant, though it is here that the greateſt grievance lies; for, in many inſtances, they are farmed like the poſt-horſe tax, and collected as rigorouſly.

Thirdly, As the farmers in England univerſally complain, that tithes taken in kind is an intolerable grievance, your correſpondent's arguments on this head will appear rather paradoxical. The reaſoning uſed is by no means concluſive, though, at firſt ſight, it wears a ſpecious appearance. For inſtance, if the proprietor receive leſs rent, what is loſt by him muſt go into the pockets of the tenants. This, indeed, might be conſiſtent with truth, if the produce of the ſoil, and, conſequently, the ability to pay a greater rent, were not leſſened by the effects of this tax. It would be truly wonderful indeed, if thoſe who are intereſted in perpetuating the tithe ſyſtem, ſhould almoſt unanimouſly wiſh to overturn it; while, *vice verſâ*, thoſe who ſteadily oppoſe every alteration, conſiſt of the only two claſſes intereſted in the abolition.

I cannot conſider the exaction of tithes as the cauſe of the general low rate of land-rent in England, though I ac-

knowledge it has its weight. Perhaps the national diſpoſition in favour of trade and manufactures, prevents capital, in many inſtances, from being veſted in rural undertakings, and conſequently leſſens the number of candidates when land is to be let. Be this as it may, the dependent ſituation of the tenantry, in many counties, from a general want of leaſes, will always keep the value of land lower than where they are placed in a more independent ſtate.

Fourthly, That tithes are prejudicial to the community, by operating as an obſtruction to improvements, I conſider equally demonſtrable as any propoſition in Euclid, though your correſpondent is 'inclined to ſuſpect that the clamour on this point is altogether without foundation.' Let us, however, look to the preſent ſtate of the extenſive waſtes in England, and conſider the practice of the country when improvements are introduced upon ſuch lands. In their preſent condition, perhaps half a crown *per* acre would be too high for an average rent, while the fee-ſimple of the property would not draw more than three pounds Sterling *per* acre at market. If tithe is drawn, which is an improbable circumſtance, conſidering the ſtock which generally occupies them, it can, in few caſes, exceed ſixpence *per* acre. Now, upon the ſuppoſition that theſe lands are to be improved in the cuſtomary way, viz. by diviſion, incloſing, draining, manuring, &c. it is clear that theſe operations would not be accompliſhed at a leſs expence than ſix times the amount of the value of the property, while it remained in its original condition; while, at the ſame time, the value of the annual produce would increaſe in a ſuperior degree. It muſt be attended to, that this increaſed value is all occaſioned by real expenditure, and, conſequently, that if tithe were drawn, it would be exactly the ſame thing as taking 10 *per cent.* upon every mercantile concern. The fact is, that no agriculturiſt will improve waſte land, without making a previous bargain with the tithe-holder; and, in every incloſure bill, a part of the land is ſet apart in lieu of tithe, which the owner improves himſelf, if he chooſes, or procures others to do it for him.

Your correſpondent inquires, if the drawing of tithe be a rational excuſe for not improving land, when the cultivator receives nine times more of the profit than the tithe-holder. Were the improvement made without expence, it is granted it would not; but, as this is not the caſe, the queſtion carries no meaning. Did he reflect upon the great expence of ſuch improvements, or conſider how the cultiva-

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tor was to be reimburſed, unleſs it was out of the increaſed produce? Ten *per cent.* upon any trade whatever, is not a bad profit, and more than is commonly returned by ſpeculations upon waſte land, eſpecially if the long outlays, and the contingent hazard, be duly eſtimated. Therefore, if tithes were drawn in ſuch ſituations, the poſſeſſor would have no profit at all.

I apprehend the conſequences of tithes will hardly be aſcertained by a reference to the comparative cultivation of titheable lands, with thoſe that are tithe-free. It cannot be maintained, that exoneration will make a bad farmer a good one, though ſuch a relief certainly holds out a ſtrong incitement in favour of ſuperior management. If we were arguing concerning the utility of leaſes, I am certain your correſpondent would not admit that leaſes did not afford encouragement to improvements, becauſe a farm was in bad order, notwithſtanding it was poſſeſſed under ſuch a ſecurity: no more can it be admitted, that the condition of a tithe-free farm ought to influence the deciſion of the abſtract queſtion. By a leaſe, the farmer gains every neceſſary ſecurity for reaping the fruits of improvements he may make; and, in like manner, the aboliſhment of tithes, *i. e.* the commutation of them, ſecures him in the full poſſeſſion of the profits.

Finally, I cordially join your correſpondent in thinking, it would be a deſireable circumſtance that tithes were aboliſhed in England, as completely as they are in Scotland. It is very probable that this tax, from the then ſcarcity of a circulating medium, was a very proper one when originally eſtabliſhed; but now, when money is the univerſal medium employed in every other tranſaction, I maintain, that not only the intereſts of the proprietor and tithe-holder, but alſo that of the farmer, calls loudly for a commutation of this ancient tax, and, conſequently, that it would promote the welfare of the community at large, to aboliſh tithes, and bury the word itſelf in oblivion. I am yours, &c.

N. B.

FOR THE FARMER'S MAGAZINE.

On the Effects of Monopoly and Foreſtalling: Extracted, by permiſſion of the Rev. Mr Findlater, from the Manuſcript Report of the Agriculture of Tweedale.

IT has been urged, that the chief advantage reſulting from ſmall farms, was prevention of the too great, or too ſoon,

heightening of the market price of grain; in conſequence of the neceſſity ſuch ſmall poſſeſſors laboured under, of ſelling immediately to procure money, from deficiency of ſtock to enable them to keep up their grain for a high price: not, however, that ſuch advantages were either ſo certain, or of ſuch importance, as to call for either public or patriotic individual interference, in order to force the lands into ſuch ſmall diviſions, to a greater extent than what would naturally take place in courſe of the demand for them.

In this view of the matter, the queſtion as to the utility of ſmall farms, naturally reſolves itſelf into the queſtion, as to the good or bad effects upon the market of grain, of a *deficiency* or *ſuperabundance* of capital ſtock in the hands of farmers, or other merchants of grain.

In the *firſt place*, then, we ſhall attempt to trace the natural and neceſſary effects of a *deficiency of capital*.

Were we, then, to ſuppoſe a large proportion of the crop veſted annually in the hands of ſmall farmers, who, from deficiency of ſtock, are obliged immediately to bring their grain to market; and were this not remedied, by the intervention of a ſufficiency of corn-merchants poſſeſſing ſtock to enable them to buy it from them, and to abſtract it from the conſumpt-market, by ſtoring it up; the conſequence would be, an over-cheapneſs, at the beginning of the ſeaſon; which would cauſe a rate of conſumpt be entered upon, that would infallibly terminate in abſolute famine in the end of the ſeaſon, were it to continue at the ſame rate till all was exhauſted. Luckily, however, the remaining few of the holders of grain, who had capital ſufficient to keep it up (ſo long as the market was glutted by the ſales of thoſe deficient in capital), would be enabled to over-enhance their price *now*, in proportion to the over-cheapneſs that had prevailed *before*; proportionally to the over-ſcarcity *now* taking place in the market, in conſequence of the over-plenty in which it was *before* ſupplied: And this comparative dearth, which would of courſe take place, would alſo be indiſpenſably neceſſary, in the view of public utility, in order to reduce the conſumpt from its former extravagant rate, to ſuch a rate as ſhould enable the remainder of the ſupply to laſt till the return of another crop.—To the conſumer, the conſequence would be, a ſurfeit, followed by a ſhort allowance, inſtead of moderate, equal feeding; a cheapneſs, followed by a proportional dearth, inſtead of a moderate, equal average price of the ſeaſon; the dearth and ſcarcity, too, aggravated probably by that abſolute waſte occaſioned by

by the over-plenty and cheapneſs in the commencement of the ſeaſon, which would not have taken place under the average price.—The advantage, it is evident, could never accrue to the conſumer: it would remain entirely with the few farmers or corn-merchants poſſeſſed of large capitals: What takes place in every buſineſs requiring capital to carry it on, would take place here—*where capital is ſcarce, its profits are high.*

In the *ſecond place*, let us attempt to trace the effects of a *ſuperabundance* of capital.

Upon this ſuppoſition, as none of the holders of grain would be under the neceſſity of ſelling it immediately, it *might* be withheld from market till an over-dearth of price took place, from miſcalculation, in the holders of it, as to the exiſting ſupply of grain in the country; a ſubject ſuſceptible only of a rough gueſs, even by thoſe who have the ſtrongeſt perſonal intereſt in aſcertaining it, and far leſs aſcertainable with preciſion by magiſtrates, or by the legiſlature. In proportion, however, as the victual-holders felt a ſlackneſs in the demand at the exiſting prices, which made it ſeem probable that a ſurplus would remain undiſpoſed of in their hands, they would certainly endeavour to avoid this, by lowering the price, as every other dealer would do in like circumſtances, eſpecially with a commodity of ſo periſhable a nature. Upon ſuppoſition, then, of the worſt effects to be dreaded from a ſuperabundance of capital, the conſequence would juſt prove the reverſing of that ſtate of the market which has been noticed as the effect of a deficiency; the conſumer would firſt experience a temporary dearth and ſhort allowance, to be followed by a ſucceeding proportional cheapneſs, and full allowance.

In judging betwixt the worſt effects to be dreaded, as to the rate of the market, from a deficiency on the one hand, or, on the other, from a ſuperabundance of capital in the poſſeſſion of farmers, or other merchants of grain; the two alternatives are left to the conſumers to decide upon, viz. (to uſe an homely phraſe) whether he would prefer, *firſt a burſt, and then a hunger*; or, *firſt a hunger, and then a burſt.*

The effects of deficiency are, however, neceſſary and unavoidable. From the neceſſitous ſituation of ſuch dealers, their conduct is not with them a matter of choice. In regard to the capitaled corn-holder, his conduct is optional, and no way forced upon him by the neceſſities of his ſituation. It is in his *power* to alleviate the dearth which enſues, upon withholding too much his ſupplies, from miſcalculation of

the crop; and it is as evidently his *intereſt* ſo to do, by then bringing forward his ſupplies more liberally, leſt they ſhould reſt undiſpoſed of upon his hands. Where there is univerſally a ſufficiency of ſtock among the dealers in grain, none of them are then obliged to ſell in glutted markets; none of them can withhold from market, in any reaſonable expectation that others are obliged to ſell in glutted markets; to the increaſe of conſumpt from cheapneſs, and the enhancing of the price of the remaining ſupply, through the thus occaſioned ſcarcity. As every one is equally ready to ſupply the demand as it ariſes, and as each is equally enabled to withhold from glutted markets; the tendency of theſe univerſal efforts of the whole dealers is, to keep the ſupply and the price at an equal rate through the ſeaſon. None can form a reaſonable expectation of ſelling at a price above the average price, proportioned to the plenty or ſcarcity of the crop; and it is the intereſt of each to ſell, ſo ſoon as he can obtain what, to his beſt calculation, is the average price. *Where capital abounds, its profits would thus be reduced, from competition.*

Judging of the deficiency or abundance of ſtock in the hands of farmers and other corn-dealers, by the fluctuation or ſteadineſs of the price of grain, we ſhould ſeem in moſt danger of ſuffering inconvenience from its deficiency; for though the certain proſpect of a very plentiful crop will ſometimes produce a fall in price, of the remainder of the preceding crop upon hand, yet, in general, the price is higher towards the termination, than the commencement of each crop. Leſs variation, in this reſpect, takes place now, it is believed, than what took place twenty or thirty years ago; which is a favourable ſymptom of the increaſe of agricultural ſtock.

The fluctuation or ſteadineſs of the market price of grain, through a ſingle ſeaſon, ſeems greatly to depend upon the deficiency or abundance of ſtock in the hands of farmers and other dealers in grain; except in ſo far as the immediate proſpect of more than ordinary plenty or ſcarcity in the ſucceeding crop, has an effect in lowering or heightening the price of the remainder then upon hand. The enormous variations in price, which takes place from ſeaſon to ſeaſon, depend, however, upon the variations of the crop as to plenty or ſcarcity; and the prices muſt, of neceſſity, follow theſe variations of the crop, till ſuch time as ſome method be invented of preſerving grain for a continuation of years, ſo as to enable the merchant of grain to embrace, in his calculation, a ſeries of ſeaſons, inſtead of confining them, as he

he does now, to the exiſting ſupply from the crop of ſingle ſeaſons.

Could a method be deviſed, of preſerving grain through a continuation of ſeaſons, ſo as to render it poſſible, (not merely, as at preſent, to transfer a ſmall quantity of the ſurplus of *one* ſeaſon of plenty, to the relief of *one* ſucceeding year of ſcarcity, but) to carry on the ſuperabundance of *ſeveral* ſucceeding years of plenty, to cover the deficiency of *ſeveral* ſucceeding years of ſcarcity, as was done by the Patriarch Joſeph, with the thoroughly ripened grain of Egypt, in the caſe of the ſeven years of plenty, ſucceeded by ſeven years of barrenneſs; and, were there abundance of capital in the hands of farmers and corn merchants to ſuffice for ſo extenſive an undertaking: In that caſe, the calculations of the market would no longer be confined to the mere exiſting ſupply of ſingle ſeaſons, but (through mere ſtrength of natural ſagacity, tracing the uſual run of ſeaſons, though unaſſiſted by the revelation of dreams) might be extended to embrace conſiderable periods of time, and might thus give a ſteadineſs to the market prices of grain, ſuited to the average of years, inſtead of that of ſingle ſeaſons; reducing the variations of price to differences of five, ten, or fifteen *per cent.*, inſtead of the preſent uſual fluctuation from ſeaſon to ſeaſon, to the enormous differences of fifty, an hundred, or two hundred *per cent.*—In ſhort, the price of grain might then be kept to ſomewhat of the ſame unvarying ſteadineſs as the price of broad cloth; and though a ſurfeiting exceſs of plenty would thus be prevented, a dearth or a famine could never poſſibly occur.

Till ſome method is deviſed, of preſerving grain for a conſiderable number of years, each year muſt continue to depend for its ſupply chiefly upon its own crop; and, in caſe of deficiency of the crop, as it is not *in the power of man to create grain out of nothing*, ſhort allowance becomes neceſſary, to prevent famine; unleſs the deficiency can be ſupplied by importation from other countries. Suppoſing the uſual annual conſumpt of a country to be equal to the crop of an year of uſual plenty; and ſuppoſing, in a bad ſeaſon, the crop to amount only to three fourths of that of an year of uſual plenty; it is evident, that if this crop is conſumed at the ſame rate as in a year of uſual plenty, it will laſt only for nine months, and leave no proviſions for the other three. It is ſhort allowance alone that can *then* prevent a ſcarcity from ending in abſolute famine.

Dearth is the natural means of producing diminution of conſumpt, ſo as to prevent famine; it is an harſh remedy, but a ſure one, and one that will occur of itſelf, exactly in the proportion neceſſary for that purpoſe, if things are left to their natural courſe. Every farmer, or other dealer in grain, (whatever they may pretend to the contrary, to avoid popular odium), will, for their own intereſt, endeavour to obtain the higheſt price that can be afforded; *proportioning the price in ſuch manner to the power of purchaſing, as that the whole exiſting ſupply may be diſpoſed of at that rate, without leaving on hand any remainder undiſpoſed of.* If the price is either over or under calculated for that purpoſe, the intereſt of the dealers will lead them to rectify the miſtake. If the price is overcalculated, it will ſoon be found, from the diminution of the demand, that the whole cannot be purchaſed at that rate of price, and that a ſurplus undiſpoſed of muſt remain on hand. To avoid then the diminution of price that muſt take place upon that ſuppoſition, and to obtain, if poſſible, the exiſting price, more ſupplies will be brought forward, and the greater influx to the market will, of courſe, reduce the prices. If, on the other hand, the price is undercalculated, it will as ſoon be found that the demand is ſo great in proportion to the ſupply, that, in a ſhort time, there muſt be a very great ſcarcity; and that thoſe who keep up their grain, will *then* be enabled greatly to increaſe their price. Theſe views will lead the dealers to withhold their grain, and to ſupply the market in leſs profuſion; till the increaſe of price decreaſes the conſumpt, ſo as to beget a probability of the alternative before mentioned. Under or over calculation of the price, or (what is in effect the ſame thing) the too liberal or too ſcanty ſupply of the market, will thus, of courſe, redreſs itſelf, from the views of the dealers to their own intereſt. The intereſt of the dealers and of the public, however ſeemingly at variance, would thus appear exactly to coincide in the ſame thing; viz. *that the ſupplies ſhould be brought forward in that proportion; and (which is in end the ſame) that the price ſhould be ſo proportioned to the power of purchaſing, as that the exiſting ſupply ſhould laſt through the whole ſeaſon, without either a deficiency or a remainder.* If, towards the end of the ſeaſon, the appearance of the ſucceeding crop affords a certain proſpect of plenty, it will then be the intereſt of the dealers to get off what remains ſpeedily, while a good price is obtainable; and the competition for ſale in the market will

lower

lower the price. If, on the contrary, the ſucceeding crop is more deficient than the one before, the certainty of a ſtill higher price, will lead the dealers to be more ſparing in their ſupply of the market: The price will, of courſe, riſe; the conſumpt will be diminiſhed; and a part of the preſent crop will remain, to cover the deficiency of a ſtill more ſcanty ſucceeding one. It ſeems not eaſily conceivable how theſe operations of grain-dealers upon the market, can ever be productive of any thing but the advantage of the public, ſo long as they are directed by their own private intereſt; a principle, for whoſe conſtant operation they may certainly be truſted, till a more ſteady principle of action ſhall be found to exiſt in human nature.

Men pinched with ſtraits, are, however, unwilling to aſcribe them to neceſſity, becauſe againſt neceſſity they know there is no reſource. They would therefore fondly wiſh to attribute them to voluntary cauſes; againſt which they can, with more feaſibility, utter their complaints; and from which they may flatter themſelves to obtain redreſs, by regulation. Hence, the invention of the imaginary crimes (as they appear to be) of *foreſtalling, regrating, and monopolizing*; the call upon Government to interfere, by internal regulation of the market; and the inept aſſumption of this power, even by enlightened governments, from the impulſe of popular clamour; together with all thoſe deſtructive outrages ſo often perpetrated by meal mobs. Had, however, theſe evil genii, the corn-dealers (who, like phantoms, haunt and diſturb the imaginations of ſo many honeſt people, in times of dearth) any *intereſted*, or rather *diſintereſted* deſign in the death of the people, they certainly go very awkwardly about their buſineſs: Their deſign might be moſt readily, and with perfect certainty, effected, if, inſtead of raiſing the price, ſo as to enforce diminution of conſumpt, they ſhould bring forward the ſupply in the ſame profuſion, and reduce the price, ſo as to communicate, to all, the ſame power of purchaſing, as in years of ordinary plenty. The exiſting ſupply, if juſt equal to a nine months ſupply of an ordinary year, would then moſt certainly be conſumed in nine months; and abſolute famine would be enſured for the other three.

1*ſt*, *Monopoly*. Of all imaginary evils, that of a monopoly of grain ſeems the leaſt to be dreaded in a free country, or in any country. Stocks may be found, amaſſed in ſuch a ſmall number of hands as renders combination poſſible, which may purchaſe up the whole of an article exiſting only in very limited quantity, ſuch as ſugar or ſpiceries; but,

but, in regard to an article of univerſal conſumpt, and raiſed in quantity to anſwer an univerſal, a conſtant, and a daily conſumpt, it is impoſſible to find ſtock ſufficient, in ſuch a number of hands as are capable of combination, to command any perceptible quantity of that article. With all the advantages for combination poſſeſſed by manufacturers, and with all the excluſive privileges which they have generally had the addreſs to procure from every government, was there ever any apprehenſion entertained of a monopoly of the general clothing of a country? How much leſs reaſon, then, is there to apprehend a monopoly of the article of general food; which certainly would require an extent of ſtock three or four times greater to command it; where thoſe who firſt raiſe it, and in whom the property of it is firſt veſted, are, from their diſperſed ſituation, utterly unfit for combination *; and in regard to which, every government (ſo far from beſtowing excluſive privileges) have univerſally ſhown an anxiety to prevent an imaginary combination, which, in fact, ſeems impoſſible in the nature of the thing? In the anxious ſituation of a dearth, it is not, however, ſurpriſing that the minds of the people ſhould give way to the terror of imaginary evils and imaginary crimes; particularly, ſince their belief in their exiſtence, receives ſanction from ſtatutes, gravely enacted with a view to their prevention or their puniſhment †. When dearth occurs, the ſtatutory crimes of monopoly and foreſtalling immediately preſent themſelves to the terrified imagination; the alarm is given, and the cry raiſed, that the dearth is *artificial*, that the criminals ſhould be puniſhed, and their wicked machinations counteracted. If by *artificial* is meant, *whatever takes place through human conduct, in conſequence of forethought*; moſt undoubtedly every dearth is *artificial*; being the reſult of the conduct of the dealers in grain, upon their calculation of the exiſting ſupply. If, however, the foregoing ſtatements and reaſonings are juſt, it will be found, that, ſo long as the dealers continue to act with a view to their own intereſt, (which is ſurely the beſt ſecurity

* The impoſſibility of a monopoly of farms, ſeems abundantly evident, from he principles taken notice of in the text; which neceſſarily lead to the circumſcription of farms within their proper bounds.

† Since the repeal of the penal ſtatutes againſt witchcraft, the belief in it hath ceaſed; an horſe can now be quietly ſeen to die of the botts, without having his death imputed to the incantations of an old woman. Were the ſtatutes againſt foreſtalling, regrating, and monopoly, repealed, it is preſumeable alſo, that a dearth would quietly be aſcribed to the natural cauſe of ſcarcity.

rity for their conduct that can be wiſhed), their intereſts, and that of the public, muſt exactly coincide, in ſo proportioning the ſupply and the price to the power of purchaſing, as, that the exiſting ſupply may laſt through the ſeaſon, without deficiency, and leaving no remainder. The more extenſive the ſtock, the dealings, and the information of the grain merchants; ſo, in proportion, will their continued efforts to buy where cheapeſt, in order to ſell where deareſt, tend to make the greater plenty of one diſtrict contribute to the relief of the greater ſcarcity of the reſt; equalizing everywhere the ſupply and the price.

2. *Foreſtalling.* The hue and cry, in regard to monopoly of grain, ſeems to have greatly ſubſided. What is called the crime of Foreſtalling or Regrating, ſeems to be the crime of the day; and, to judge of it by the newſpaper accounts of the exorbitant fines recently impoſed in ſome inſtances, it would ſeem to be conſidered as a crime of a deep dye. So far as it is poſſible to collect the meaning affixed to the term, foreſtalling or regrating, the eſſence of the crime would ſeem to conſiſt in the practice *of buying, upon a market day, articles of food of any kind, already upon their road to market, or arrived at the market; with the intention, manifeſted by the overt act, of ſelling them over again, with a profit, in that market-place, and upon that ſame day.* There is ſurely, however, no crime in ſimply dealing in victuals, with a view to profit, more than in drink, or clothing, or furniture, or any other ſpecies of merchandize. The criminality, if there is any, muſt originate in the circumſtances under which they are bought and ſold. It appears difficult, however, to conceive wherein lies the criminality of buying, to ſell over again, with a profit, upon the market day, more than upon the day preceding; or upon the road, or in the market-place, more than in an houſe, or in a field. To attempt to impute criminality from ſuch circumſtances, ſeems about equally conſiſtent with the gravity and good ſenſe of magiſtracy, as to attempt attaching witchcraft to an old woman, by pricking her for the devil's mark.

An imperious public neceſſity may cauſe an innocent action be conſtrued into a crime; like that of the ſentinel, who is ſhot, for involuntary ſleeping upon his poſt: In theſe caſes, however we may regret the innocent ſufferer, the neceſſity of the regulation reconciles us to his fate. But, before we can conſider the fines recently impoſed, as any thing elſe than oppreſſive; or the interference in any ſhape, as any thing elſe than

than impertinent; it would be neceſſary to point out the neceſſity of conſtruing into a crime an action, in itſelf conſidered, which is neither cenſurable nor meritorious; to point out, as in the caſe of the ſentinel, the harm that would enſue, from the toleration of a practice indifferent in its own nature.

There are only three intereſts, to which the practices of the foreſtaller can bear any conceivable relation, or can in any way affect: That of the foreſtaller himſelf; that of the farmer or original producer; and that of the conſumer.

In regard to the intereſt of the foreſtaller, it is evident, that no intereſt has been, or is taken in it, either by the law, or by the magiſtrate; it is left entirely to his own diſcretion, though generally the moſt in hazard of any of the three.

In regard to the farmer, in no country do the laws, relative to this ſubject, ſeem to have originated in any view to his intereſt; but to have been obtained from another quarter. Every dealer, who ſits in a work-ſhop or behind a counter, within the precincts of a Royal burgh, ſeems to grudge that the farmer or victual-merchant ſhould obtain any profit from their reſpective profeſſions; and has the aſſurance to condemn, in them, the maxims by which his own whole conduct is regulated, of taking all the profit upon his commodity that the market will afford him; unfairly narrowed, too, as is the competition againſt him in his own market, by the excluſive privileges with which his little corporation is inveſted; enabling him to reap ſo much over-proportion of profit upon the drink, or clothing, or furniture of his cuſtomers, as leaves them leſs than in due proportion to lay out upon their victuals: In every view of utility, the profeſſion of the farmer or the victual-dealer ſeems, at leaſt, equally entitled to protection and encouragement, as that of any producer or merchant. Stunned, however, by the inceſſant clamour with which his ears are continually aſſailed, and which is ſo ready to overſet the firmeſt concluſions of reaſon; the magiſtrate of a burgh, too, generally conſiders it as eſſential to his official character, to ſet himſelf in a ſtate of direct hoſtility againſt the farmer and victual-dealer. The contagion of ſuch ſentiments ſeems, alſo, more or leſs to have infected every legiſlature; leading to the adoption of the mobbiſh idea, of forcing every farmer to become alſo retailer; in the ſilly conception of thus ſaving the retailer's profit to the conſumer; though, in contradiction to that beſt eſtabliſhed of

all

all political axioms, that, *in proportion to the ſubdiviſion of labour and employment, more work is performed, in leſs time, and in better manner, and at a cheaper rate.*

The intereſt of the foreſtaller and farmer being out of the queſtion, and, in fact, never attended to in the diſcuſſion; the only other intereſt that can poſſibly be affected, is that of the conſumer; and the only conceivable manner, in which his intereſt can be hurt, is, by the enhancing of the price of the commodity.

The conſumer may, perhaps, in his great wiſdom, conceive, "that, as the original holder of the commodity did, in fact, ſell it to the foreſtaller at a certain price; it was from thence evident, that ſaid holder *was willing* to have parted with it at that price: that, conſequently, if the foreſtaller had not ſtept between, but allowed it to come to market, the original holder *would have* ſold it at that price; but, now that the foreſtaller has paid that price, he *will not* part with it without a profit; which profit, *therefore*, the conſumer *muſt pay*." This ſtatement certainly contains every ſhadow of a reaſon that can be adduced, to ſubſtantiate the hurt which can accrue to the conſumer. If the fallacy of his argument, however, does not appear from the *Italics* in the printing, it will be abundantly evident from the following conſiderations.

The price in the market depends, not upon any ſingle intereſt, or view, or will; but upon the general combination of all the views, intereſts, and wills, of the whole buyers and ſellers *in cumulo*; when (after higgling and mutual explanations of views, with their reaſons on both ſides of the queſtion, as to the preſent ſtate and future proſpects), the prices ſettle in a rate conformable to what is generally conceived to be the proportion betwixt the actual or preſumeable ſupply to the demand. To this alone, both ſellers and buyers refer, in endeavouring to fix their ideas of what the market price ſhould be; and nothing elſe is by either taken into conſideration. If the foreſtaller has, or thinks he has, a clearer preconception of what will turn out to be the market price, than thoſe upon their way to the market; and finds, upon trial, that they expect leſs than he imagines the market will afford; in that caſe he buys. If, on the contrary, he finds that their expectation exceeds his ideas of what the market will afford; he does not buy: Well knowing that he can have no expectation of profit from the tranſaction, but upon the firſt ſuppoſition; as the market price muſt determine his profit, and not his profit the market price.

price. Had *his will* to obtain profit, the power of regulating the market price, he would buy equally upon either ſuppoſition. He pretends not, however, to be poſſeſſed of the wiſhing cap of Fortunatus.

The conſumer buys in the market at the market price: If the foreſtaller has given more for commodities upon the road to market, he muſt be contented to ſuſtain loſs; and it would be ridiculouſly ſimple in him to think, that the conſumer will conceive himſelf under any obligation to pay him more than market price, to prevent him from ſuſtaining loſs, or from going without a profit. It would be an equally ſimple conception in the conſumer, or foreſtaller-hunter, to imagine, that the farmer (whoſe conceptions of the market price, while upon his way to market, fell ſhort of what turns out, in fact, the price) ſhould conceive himſelf as under any obligation to reſt ſatisfied with what he would *then* have been willing to have accepted, when, upon arriving at the market, he finds he can obtain more: If he is conceived to be under obligation to that purpoſe, he ſhould be put to his oath as to the price he had expected, and be compelled to accept of that price.

The profit or loſs, then, from the previous operations betwixt the foreſtaller and farmer, reſt entirely between themſelves, according as either has formed the more juſt preconception of the market price. Theſe operations can, in no ſhape whatever, affect the conſumer, whoſe price is uniformly the market price *.

The foreſtaller can hardly expect to obtain profit, by buying in a market, and ſelling over again in that ſame market; as, after the market is ſeen, every one's ideas are more up to the market price. If, indeed, a knowledge of ſcarcity has recently occurred (from failure of crop, for inſtance, elſewhere), which is, as yet, only in poſſeſſion of a few; he may, in that caſe, buy up with a proſpect of profit; if not in that market, at leaſt in a ſucceeding one, by the time ſuch knowledge ſhall have become general; when, if his information turns out well founded, he will obtain profit; and his practice, inſtead of proving hurtful, will only contribute to the more timely production of that dearth, which alone can inſure that diminution of conſumpt which is neceſſary to prevent ſcarcity from ending in famine; if his information

* The market price is that to which every bargain tends, but which none attains; in every market, almoſt every particular bargain is made a little higher or lower than the average of the whole, which is the market price.

formation turns out ill-founded, he will obtain no profit, but may ſuſtain loſs.

Were we to ſuppoſe a chartered company, inveſted with the excluſive privilege of purchaſing all the grain and butcher meat of a country, at ſuch a price as they chuſe to give, and of compelling all the conſumers to purchaſe it from them, at a price fixed by the company: Or rather, to make the ſuppoſition bear ſome faint reſemblance of poſſibility, were a government to aſſume this privilege over a conquered country, and to enforce it by all the power of the military eſtabliſhment; In that caſe, it is at leaſt a poſſible ſuppoſition, that (in order to ſave warehouſe room) the one half of the proviſions might be deſtroyed, and that the price of the remainder might be raiſed ſo high, as to force out, in the purchaſe, the whole ſubſtance of the inhabitants who did not die of want in the *interim*. Here would be, not an *artificial dearth*, (which is ever neceſſary to prevent famine, in real ſcarcity), but an *artificial ſcarcity*, with a vengeance; though, certainly, it would be a much more eaſy and leſs circuitous mode of obtaining the wealth of the inhabitants, at once, to murder and to rob them. If one ſcourging crop were thus taken off a country, it would be idle to expect a ſecond.—It is probable, however, that ſome monſtrous chimæra of this nature haunts the imagination of foreſtaller-hunters; inſpiring terrors, ſimilar to, and equally reaſonable, as thoſe of children for hobgoblins in the dark *.

Mr

* Though the deſtruction of proviſions is a thing not unuſual in meal mobs, I have heard of no inſtance of the deſtruction of vivres by dealers, which ſeemed in the ſmalleſt degree probable; except in regard to Edinburgh butchers, who, it is ſaid, ſometimes bury their meat, remaining upon hand after a glutted market, when beginning to grow tainted. 'Tis pity, any thing ſhould be thus deſtroyed, which can afford ſuſtenance to man: It were better ſold, at a low price, to poor people. The fault, however, ſeems not to lye with the butcher, but muſt be aſcribed to the interference of regulation. The magiſtrates are conceived officially bound to inſpect the markets, and to take care that no damaged proviſions are expoſed to ſale; a delinquency which they are empowered to correct, by forfeiture of the commodity, and the impoſition of fines: To be catched in this mere ſtatutory delinquency, expoſes the perſon to a ſort of ignominy, attached to it by rote. The magiſtrate, upon inſpecting the market, condemns, at diſcretion, the fleſh meat which he conſiders as damaged by taint, or even what he conceives merely to be too lean; and, I am told, ſends it to the poor's houſe. Rather than loſe his meat in this ſort of ignominious manner, the butcher may be expected to bury it out of the way, ſo ſoon as he apprehends riſk of its being condemned by the arbitrary power of a magiſtrate. As nobody, however, can be compelled by the butcher to purchaſe his meat when it is tainted, or lean; it does not appear, that any harm could enſue from leaving this

Mr Burke juſtly obſerves, in treating of the power of language to excite the paſſions, that the effect is not produced in conſequence of ideas conveyed, but merely through the power of ſympathy. When, from infancy, we have been accuſtomed to hear certain words always pronounced in the tone of indignation, we are, from ſympathy, fired with the ſame indignation; the word and the paſſion get aſſociated from habit; ſo that, when one is preſented, the other is excited. This accounts for numberleſs prejudices of education. If we would wiſh to riſe ſuperior to mere prejudice, we muſt analyze the ſubject of our prejudice, to diſcover, by its proper teſt, whether it is well-founded. I have known a perſon entertain a moſt violent antipathy to ſwine's fleſh, though he had never taſted it in his life; and who, of courſe, could not know, by the proper teſt, whether he really liked or diſliked it. When we hear the cry raiſed againſt foreſtallers, regraters, and monopolizers, inſtead of allowing ourſelves to be hurried away by an inſtinctive terror and anxiety for their extirpation, (as in the alarm of a mad dog), we would do wiſely to inquire into the nature of the objects of our terror, that we may know whether there is real danger, or whether we ourſelves only are panic-ſtruck.

Were the laws againſt theſe imaginary crimes repealed, the belief in them might ceaſe, as in the caſe of witchcraft, and the magiſtrate might be ſaved much diſagreeable embarraſſment.—Innovation, however, is dangerous; and it is, perhaps,

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this matter entirely to the diſcretion of the purchaſer. It ſeems hard, to deprive the poorer claſſes of the option of having meat of inferior quality, at a low price, rather than no meat at all. Fleſh meat, lean from ſcanty feeding, or too much exerciſe, is even more wholeſome than pampered, ſtall-fed, fat meat. Even after it hath acquired a conſiderable taint from keeping, fleſh meat ſeems no way noxious to the conſtitutions of thoſe whoſe ſtomachs can receive it. In country places, at a diſtance from market, it is well known to be neceſſary, even in genteel families, to keep fleſh meat, for chance of ſtrangers, till it hath often contracted a conſiderable degree of taint; ſo that moſt of it is uſed in this ſtate, and without any ſenſible inconvenience. In ſheep countries, the herdſmen live very much upon the fleſh of ſheep, dead of the ſickneſs or iliac paſſion, the very ſmell of which is intolerable to thoſe unaccuſtomed to it; and they are a claſs of people who are certainly upon a *par* with any claſs inhabiting great towns, in point of ſtrength, or agility, or ſoundneſs of conſtitution. If ſuch meat can be digeſted by the aged and infirm in an alms-houſe, it could ſurely do no damage to the ſtronger organs of a ſtreet-porter, or other day-labourer. It would be abſurd to ſuppoſe, that poiſonous aliments are knowingly ſent to the poor's houſe, in order to get rid of the penſioners! or, that the butcher is fraudulently made to incur a forfeiture of his meat, that they may be ſupported at his expence, without charge to the funds. A zeal, without diſcretion, may, however, betray the beſt-intentioned into inconſiſtencies; or rather, an abſurd imputation of duty may force men upon abſurdities, which they ſee and lament, but cannot avoid.

perhaps better that they ſhould die their natural death, by becoming obſolete. Meanwhile, it might probably be expedient to remit the cognizance of all ſuch cauſes to juries; who, as they judge both of law and fact, might gradually cauſe the whole to fall into non-execution, in proportion as good ſenſe began to prevail.

3*d*, *Interference of Government.* The *proſpectus annonæ*, or care of the annual ſupplies, is a duty which every people have imputed to their governments, in the idle conception, that their governors can provide their bread; an imputation which frequently impels government to interfere; ſometimes, perhaps, in the conviction, though, ſurely, more often without any, of their ability to effect the purpoſe.

It might be an eaſy matter, for the elder, or chieftain, of a tribe of American ſavages, to take an account of the whole annual crop of maize, raiſed in common, by the labour of the women, and all collected into one ſpace round the Indian town; and to divide the whole in equal proportions among the different families of the tribe. In an extenſive, well cultivated European ſtate, where cultivation goes on, not in the languid manner of a general concern, but under the keen animation of a ſenſe of ſeparate intereſt, it is impoſſible any government can either aſcertain the extent of the ſupply, or the proportion to every individual upon a diviſion; or that it can attempt the violent ſeizure, and arbitrary diſpoſal of private property, without giving a check to induſtry; the ruinous conſequences of which would infinitely more than counterbalance any temporary advantage that might be conceived to reſult from any ſuch interference. The only proper interference of ſuch governments, in order to inſure plenty, is, not by temporary intermeddling, but, by general laws, protecting the cultivator of the ſoil, and inſuring him of reaping the profits of his own induſtry, both againſt the oppreſſion of his ſuperiors, and the outrage of popular ferments.

In years of ordinary plenty and cheapneſs, matters are allowed to go on quietly in their natural courſe: In dearth, however, clamour riſes high; governments are loudly called upon to interfere, and are ſometimes forced to interfere, or, at leaſt, to affect a buſtling ſhow of interference, merely to prevent popular inſurrections; though under conviction, that ſuch interference, inſtead of doing good, often tends to increaſe the very evil it was intended to remedy. It would certainly be a matter of much advantage, were the people at large duly appriſed of the effects to be expected from the interference of government; that it may neither be impelled,

from clamour, into ruinous meaſures, nor blamed for declining interference, where it might be productive of harm, and could do no good.

As it is not in human power to create grain, it is evident, that, in caſe of ſcarcity, neither government, nor the richer claſſes of the community, can do any thing to alleviate the ſcarcity, or to procure greater plenty; but, by diminiſhing their own conſumpt of grain, to produce a ſaving; or, by contributing funds for the purpoſe of importing grain; or, enticing adventurers, by a bounty, to import it, at their own riſk, from other countries—a meaſure, which the partial range, to which man's benevolence muſt be confined, to be adequate to his power, will juſtify in a nation, though at the expence of other nations; but which will hardly be equally juſtified in the adminiſtrators of a burgh, in attempting to relieve the town, at the expence of the provinces; or in the inhabitants of a province, in attempting to interrupt the free circulation of grain for the relief of the town.—Even this interference, the only one that can really augment the quantity of grain, and really relieve the ſcarcity, ought to be gone about with great diſcretion; leſt the very idea of government interference ſhould augment the alarm of ſcarcity, and, in conſequence, lead to miſcalculation of the ſupply, and increaſe (for a time at leaſt) the dearth *.

In the way of internal regulation, governments may, and do ſometimes, interfere, in times of ſcarcity and dearth; though this mode of interference, eſpecially of that kind to which governments are impelled by popular clamour, is always hazardous in the extreme.

In all modes of internal government, interference with the ſupplies and the price of the market, there is one principle which can never be departed from, without expoſing the people at large to the moſt imminent danger of periſhing through famine, viz. *that the price ſhould be ſo proportioned to the power of purchaſing, as that a rate of conſumpt ſhall be ſecured,*

* In the ſcarcity of 1795-96, the Parliamentary hue and cry about dearth and ſcarcity, (when, from vulgar conception, or the deſpicable attempts at popularity, on the eve of a general election, many ſpeeches were delivered, which might have ſuited the ringleaders of meal mobs), moſt certainly led to great miſcalculation of the ſupply: to conſequent withholding from market, in a greater proportion than the dre one: Of courſe, the dearth rapidly increaſed, till Parliament were impelled to entice adventurers to import, at a moſt extravagant bounty. The dearth, however, proved, in end, to have been ſo egregiouſly miſcalculated, that it was found, that dearer victual was imported, to compete with cheaper in the home market: The adventurers would, of courſe, have been ruined (notwithſtanding the high bounty) without parliamentary allowance.

cured, which ſhall inſure the laſt of the exiſting ſupply, till the return of another. If the price is fixed at an higher rate, the people are pinched more than what is neceſſary; if fixed at a lower rate, famine muſt neceſſarily enſue.

Were governments never to interfere, but from decided views of public utility; in that caſe, we would often ſee anxiety diſcovered to fix a *minimum* price, leſs than which ſhould never be accepted, under ſevere penalties, in order to inſure that moderate rate of conſumpt, which would prevent the crop from being eaten up, before the return of another, the conſequence of which would be irremediable famine. As, however, no government ever did, in the annals of hiſtory, nor ever will interfere, to fix a *minimum* price; it ſeems pretty evident, that views of public utility never did, nor ever will, ſuggeſt the propriety of any interference at all.

The only interference of government, of which we have, or ſhall ever have an account, is, in the fixing of a *maximum* price *.

The fixing of a *maximum* price can only be done (if public good is conſulted) to prevent the dearth from being overcalculated. Wherever there is dearth, however, it is overcalculated in the imagination of the people at large. If Government ever is impelled, therefore, to the fixing of a *maximum* price, it may be eſteemed certain, that this price will be fixed at a lower rate than the exiſting one; and (if it were in the power of any Government, which fortunately it is not, perfectly to enforce the regulation) the conſequences to be apprehended are obvious.

It may be alleged, that if a *maximum* price were fixed in dearth, even ſo low as to be ſo proportioned to the univerſal power of purchaſing, as to allow every one to purchaſe as much as he could do in an uſual year of plenty, that the effect would only be, to place the ſhort allowance, neceſſary in order to prevent a famine, upon the footing of *option*, inſtead of that of *neceſſity*; and that every one, from conviction of the neceſſity of the meaſure, would *voluntarily* be-

 take

* When the French Convention (apparently under the influence of the Paris meal mob in the galleries) eſtabliſhed the law of the *maximum*, a famine was conſidered as the inevitable conſequence, by every perſon of reflection. Luckily for that people, there are meaſures which the moſt ſcrutinizing tyranny cannot carry into full effect.

With all the means of information, and ability of cool inveſtigation, poſſeſſed by a Britiſh Legiſlature, no meaſures of effective internal interference were hazarded in 1795-96: Luckily they were not ſo overawed.

take himſelf to that ſhort allowance, neceſſary to make the exiſting ſupply laſt till the return of another. Such a ſcheme would appear, however, perfectly utopian. Unleſs every one were ſuppoſed to know, what it is impoſſible for him to know, the proportion of the exiſting ſupply to that of an ordinary year, ſo as to know the proportion of abſtinence that fell to his ſhare, in proportion to the deficiency of the exiſting ſupply; and unleſs the good faith of every one could be depended upon, for his voluntarily practiſing that meaſure of ſelf-denial which was neceſſary, a famine would be the neceſſary reſult. How little *optional ſelf-denial* can be depended on, will, it is apprehended, be ſufficiently evident to thoſe who have a family of ſervants that eat in the maſter's houſe. It is believed no maſter, ſo circumſtanced, ever found his ſervants willing to be contented with leſs victuals in an year of ſcarcity, than in an year of plenty. Such a propoſal was probably never made by a maſter, from the certainty that it would not be liſtened to *.

That

* Were the practice more prevalent, of giving ſervants a certain allowance of meal and money in their own houſes, in lieu of victuals in the houſe of the maſter, the temptation of diſpoſing of the ſavings, at an high price, would uniformly inſure a conſiderable degree of ſaving, in an year of ſcarcity and dearth. Self-intereſt is an energetic principle, in every ſituation. In ſituations of obſcurity, where the motives of obtaining credit and celebrity are not preſented, it is not to be expected that views of public utility ſhould have ſuch influence. In the ſcarcity of wheat in 1795-96, it was eaſier for our Sovereign to bring himſelf to the ſelf-denial of ſubſtituting the meal of barley to the flour of wheat in the Royal houſehold, than to perſuade the meaneſt of his ſubjects in pariſh work-houſes to follow the example.---In ſcarcity, the dearth of price places the ſelf-denial of the generality upon the certain ſecurity *of neceſſity*, inſtead of the precarious one *of option*. Among thoſe, however, who are ſo rich, as that the dearth does not neceſſarily enforce a change in their mode of living, ſhort allowance muſt remain in a great meaſure *optional*. Sumptuary laws can have here little effect: they cannot be enforced, except at the expence of retaining a ſpy or exciſeman in every houſe. As they admit, therefore, of no ſanction, they amount merely to recommendations. Perſons, however, in ſuch ſituations, are few in number; and as they live leſs on bread, (everywhere the great article of food among the generality) and more upon butcher meat, though their ſhort allowance cannot be enforced by *neceſſity*, it is of the leſs conſequence, as all their ſavings of bread could have but an imperceptible effect in producing more plenty to the generality. Inconſiderable, however, as the amount may be, to which ſuch ſavings could ariſe, it is certainly the duty of all, in ſuch ſituations, to practiſe ſaving; for, as grain cannot be created, the only thing remaining to be done in ſcarcity, is to ſave, that the ſupply may laſt out the ſeaſon. In ſuch conſpicuous ſituations, the credit to be obtained, by ſetting a good example, will always inſure a conſiderable degree of ſaving; particularly, for inſtance, pampering parade horſes, where their greateſt grain-conſumers lies.

That a legiſlature may fix a *maximum* price in ſuch a manner as to incur no riſk of producing an abſolute famine in an year of ſcarcity, it would be indiſpenſably neceſſary that it ſhould be perfectly appriſed of three things, neither of which can probably be aſcertained by any legiſlature in a manner in the leaſt degree approaching to preciſion: *Firſt*, The rate of conſumption of grain in an year of ordinary plenty: *Secondly*, The proportion which the exiſting crop bears to that of an year of ordinary plenty: *Thirdly*, The extent of the power of purchaſing, in poſſeſſion of the whole conſumers of grain. A *maximum* cannot, with any degree of ſafety, be fixed, unleſs founded upon a perfect knowledge of all theſe *data*: ſo that the price may proportion the power of purchaſing ſo exactly to the exiſting ſupply, as that a rate of conſumpt may be enſured, which ſhall enable it to laſt till the return of another.

The Britiſh Legiſlature, in 1795-6, however ſtrongly impelled, and notwithſtanding of its ſuperior means and ability of information, durſt not hazard a meaſure ſo evidently fraught with the moſt imminent danger.

If matters are left to their ordinary courſe, the intereſt of dealers in grain would appear evidently to have the effect of producing, with certainty, and without danger or violence, preciſely what any enlightened legiſlature would propoſe by internal interference of regulation, viz. *the fixing of the price at ſuch a rate, as ſhall ſo proportion the power of purchaſing to the exiſting ſupply, that it ſhall laſt out the ſeaſon without remainder or deficiency.*

In regard to individual patriotic interference, for the alleviation of ſcarcity, it has been already obſerved, that, as grain cannot poſſibly be created, the only thing remaining to make the ſupply ſuffice, is to ſave it, or to import it from other countries. In regard to interference, as to the power of purchaſing, either by diſtribution of money to increaſe the power, or by reducing the prices, ſo as to render the ſame money-power adequate to a greater extent of purchaſe, it may be obſerved, that this ought always to be attempted by the rich, in regard to thoſe, who, from age, from ſickneſs and infirmity, or from families more than ordinarily numerous, are unable to compete in the ſcramble of the market with thoſe who are not weighed down by ſuch incumbrances: To increaſe indiſcriminately the money-power of purchaſing to a few in a particular diſtrict, would only give relief to thoſe few, at the expence of the generality. An univerſal diſtribution of money, would only bring more mo-

ney into the grain market; but, as it could not augment the ſupply of grain, the effect of the competition would only be, to increaſe its money-price; but the quantity which each perſon could carry home, would be exactly what it was before. Such a meaſure would, indeed, in ſome degree, counteract this direct effect; for, as ſuch diſtribution muſt be at the expence, and tend to the diminution, of the funds deſtined to ſupport uſeful labour, the demand for ſuch labour muſt ſlacken in proportion; and, of courſe, the money-power of purchaſing muſt be diminiſhed in the one way, in the ſame ratio in which it is increaſed in the other.

(Further extracts from this valuable work will be given upon a future occaſion.)

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

The following agricultural ſtrictures were written in Auguſt 1799, to a friend, whoſe eſtate is ſituated on one of the great roads, about forty-ſeven miles north from London. It refers to the farm-management of that eſtate, which was moſtly in the poſſeſſion of the proprietor, under the care of a ſteward. The whole eſtate at the time was titheable, and moſt of it common-field land; but has ſince been divided under an act then paſſed, and land has been allotted in lieu of tithe. I was requeſted by my friend to view the property, and to give my opinion of its agricultural management, which was complied with, in terms of the ſeries of letters now tranſmitted to you. Should they ſuit your valuable Miſcellany, you are welcome to publiſh them, either in their preſent ſtate, or in abridgement.

It may be proper to mention, that the ſoil of the eſtate to which they refer, is a ſtrong clayey loam, rather ſhallow in general, and incumbent on a very deep clayey ſubſoil, differing little from the cultivated ſoil, except by the want of vegetable mould, from the abſence of manure and decayed vegetables. Both ſoil and ſubſoil, eſpecially the latter, are ſtrongly impregnated with calcareous matter, as evinced by effervefcence with vinegar; and, in the ſubſoil, the calcareous, chalky, or marly part, is diſtinctly and copiouſly viſible. This circumſtance will account for the abſence of lime, in the agricultural propoſals have made for improvement; and, beſides, lime is ſo very

diſtant

diſtant from the place, and conſequently ſo dear, as almoſt to preclude its uſe, even if the quality of the ſoil rendered it, in other reſpects, adviſeable: So far as I can now recollect, it would have coſt twelve guineas the acre, to give a complete dreſſing with lime. I remain, &c.

Merſe, 1800. *R. R.*

Strictures on Farm-Management near London, in a Series of Letters, to a Friend.

LETTER I.

Auguſt 1799.

ALTHOUGH it is a very unpleaſant taſk to find fault, and my obſervations on the huſbandry that is practiſed on your eſtate, will be chiefly of that deſcription; yet, as truth is my object, and improvement yours, and as you have required me to ſtate my opinion fully and freely, you muſt be contented to receive reprehenſion on a conſiderable number of topics, and that not very moderate in degree.

You may comfort yourſelf, however, with the reflection, that my reprehenſive obſervations are equally applicable to the practices of all your neighbourhood; at leaſt, ſo far as I had an opportunity of ſeeing. Nay, you may extend this conſolatory idea farther, and with a vengeance; for I can with truth aſſert, that in my late journey to London and back, through nearly four hundred miles of road, about two hundred of which were twice ſeen, I did not obſerve one field in ten, among the *home lands*, that I could conſider as well cultivated, few of them even decently; and not one field at all, of the *common lands*, that was not evidently under the moſt infamous ſyſtem of neglect and miſmanagement.

Do not imagine this almoſt general condemnation of Engliſh huſbandry, along two very conſiderable roads, leading north from London, to proceed from an arrogant deſire of ſetting myſelf up as a dictator in farming operations. I left home, with an ardent deſire of profiting by ſuch ſuperior management, as I expected to meet with on my journey, ſo far as could be ſeen, during the rapid motions of a ſtage coach. And, for that purpoſe, took the outſide, for at leaſt the laſt hundred miles of my upwards journey; and for almoſt the whole three hundred and fifty of my journey homewards.

I had, beſides, the advantage of aſſociating with a very extenſive and experienced Northern profeſſional farmer, of great ſagacity and communicativeneſs, for about two hundred miles of my journey up; by whoſe converſation and remarks I profited largely: And I frequently found the guards, and often met with paſſengers, capable of giving me conſiderable information.

Except within eight or ten miles of London, where I had occaſion only to ſee the meadow, or old graſs huſbandry, my only minute information, and near examination, was on your eſtate, where your foreman, or ſteward, was moſt attentive in explaining every point of practice; and, from what I ſaw generally around me, I am convinced the major part of the great extent of country I travelled through, was managed on exactly ſimilar principles with your land.

To an eye of any experience, a curſory view, ſuch as mine, at certain ſeaſons, is ſufficient to give a very tolerable notion of the general ſyſtem, and even of the particular practices of huſbandry, by which that is accompliſhed; and the ſeaſon of my journey was favourable for my purpoſe, as the fallow proceſs was then almoſt univerſally in activity.

In the following pages, you will find my maturated ideas, reſpecting the preſent cultivation of your eſtate, and a plan of operations for putting it into a ſpeedy ſtate of very conſiderable improvement. I am perfectly convinced, in my own mind, that the ſyſtem I have propoſed to you, would at leaſt double its value, and in a very few years.

While on the ſpot, I walked over as much of it as I was able, in fields, under different courſes of the ſyſtem which is there purſued, and took ſhort notes of every circumſtance that occurred, as meriting attention. In the evening, at the inn where I lodged, I wrote out theſe more at large, with incidental remarks. Since my return home, I have taken every opportunity of converſing on the ſubject, with experienced huſbandmen occupying ſimilar ſoils in this country, to enable me the better to give you ſound advice.

Theory, I have in no caſe admitted to influence my opinions, though I, perhaps, could theoriſe as plauſibly as my neighbours; but I conſider our knowledge of ſoils, manures, and vegetation, as yet too much in its infancy, for a rational theory of huſbandry.

All I have now to add is, that whether you follow my advice

vice * or not, in whole or in part, I moſt ſincerely wiſh you every poſſible ſucceſs. I am, &c.

Strictures on Farm-Management, near London.

LETTER II.

Aug. 1799.

In all clayey or retentive ſoils, ſuch as that of your eſtate, Fallow is the grand foundation upon which the ſucceſs of every crop that is to come after, ultimately depends. According as that fundamental proceſs of every judicious ſyſtem of huſbandry is well or ill executed, ſo muſt all the ſucceeding crops be comparatively good or bad, all other circumſtances being equal. That proceſs of farming, therefore, requires the utmoſt exertions of ſkill, induſtry, and attention, from the huſbandman, that it may be executed properly and effectively; and therefore I have choſen to call your attention firſt to it, in my obſervations upon the management of your eſtate.

The neceſſary requiſite of every legitimate fallow is, that it ſhall clean the land from all root weeds, effectually, and very conſiderably from ſeed weeds. The former, during the various ſteps of the fallow, are to be brought up to the ſurface, and carried off. The ſeeds of the latter are brought repeatedly into full vegetation, and then deſtroyed. No ſubſequent proceſs, in the courſe of that rotation, or courſe of crops, to which the fallow gives commencement, can, in any material degree, diminiſh the quantity of root weeds which encumber the ſoil: the ſeed weeds may unqueſtionably be kept under, and ought to be deſtroyed as much as poſſible, throughout every part of the ſucceeding courſe of rotation. Having already diſclaimed all theoretic diſcuſſion in the courſe of my preſent obſervations, I ſhall not even hint at any other object of fallow, beſides that of cleaning the land in the moſt complete manner poſſible.

Judging of fallow, by the above rule or definition of its intention, that which is practiſed with you, and over the great maſs of country which I viewed in my late journey, by no means deſerves the name. For the ſake of a little miſerable feeding to your half-ſtarved ſheep, what your people term fallow, is moſt ſhamefully performed, or rather, it

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* It may be proper to notice, that the gentleman to whom theſe ſtrictures were addreſſed, has in conſequence employed their author to procure him an experienced Scots ſteward, and has adopted the implements and practices of that diſtrict in a great degree, and on an extenſive ſcale.

it is moſt completely neglected in a manner altogether. It is not only not cleaned from weeds, but, as I was informed, a quantity of trefoil, or yellow clover ſeed, is ſown with the foregoing crop, to mend the *feed*, forſooth, for your ſheep; and, on account of the meanly deſpicable value of that ſcanty crop of trefoil, aſſiſted no doubt by the *couch*, and other weeds in countleſs variety and quantity, the fallow is left unploughed as long as poſſible; ſo long, indeed, that, when at laſt it comes to be ploughed, there is no longer time to clean the land at all, far leſs to clean it effectually; and conſequently, every ſucceeding crop has to labour hard for its ſubſiſtence, among a matted bed of weeds of every denomination; and you have to thank the excellence of your ſoil and climate, that your crops are ultimately worth the trouble of cultivation and harveſting. It would certainly be infinitely better, in every poſſible reſpect, that you ſhould have a ſufficiency of ſown graſs, which ſprings up a vaſt deal earlier than old meadow, and is greatly more abundant in its produce, in another field, to ſerve as early feeding for your ſheep. In ſome of the beſt-managed diſtricts in the ſouth, other early crops are grown for this purpoſe, ſuch as rye, winter tares, and rape; but, of theſe, I am by no means well informed, and therefore leave you to derive inſtruction from other ſources; ſuch as, Marſhall's Surveys, and the various Reports to the Board of Agriculture. My intention, in theſe remarks, is, not to copy from authors on huſbandry, but ſimply to preſent you with the reſult of my own experience and obſervation.

You have this year, 1799, on your eſtate, a full and admirable proof of the very great ſuperiority of newly ſown graſs and clover, over old meadow, both as to earlineſs and quantity of produce. In the cloſe, which I think is called the *long meadow*, the irregular ſtripe of newly ſown clover and rye-graſs, where the croſs-hedge had been grubbed up laſt year, was perfectly ripe for the ſcythe, when I viewed it, on the ſecond or third of July: while the fine old meadow of that field, the beſt, as I was informed, on the eſtate, which had been reſerved for hay, from Lady-day, at leaſt from May-day, was at the ſame time too ſhort for any thing but the bowling-green ſcythe and beſom; and did not promiſe to become fit to cut, as an inferior crop of hay, in leſs than three weeks or a month after that period. Had the whole field been under a crop of cultivated graſſes, after a judicious ſucceſſion, commencing by a perfectly well-conducted fallow, I feel no heſitation whatever to aſſert, that

that it might have produced, at leaſt, a double weight of excellent hay, and might have been again ready, as ſheep paſture, near a month earlier than it can this year, under its preſent management.

I will engage for the truth of the following aſſertion, that the loſs upon the very firſt crop which ſucceeds to ſuch an ill-conducted and imperfect fallow, as that I am now reprobating, a great deal more than compenſates for all the advantages which can poſſibly be derived from the wretched ſheep feed which it produces: And, in proof of my aſſertion, I ſhall give you a ſeries of comparative facts, by which you may judge of its validity.

Your foreman informed me, that twenty buſhels of marketable wheat, is conſidered, with you, as a *very* good produce from an acre of land ſo fallowed and completely dunged, in what are called the home lands; and about fourteen buſhels in the common lands. On my farm, which is not a wheat ſoil, I grew, laſt year, 1798, twenty-ſeven buſhels on one acre, which had been turnips that were led off for my cows and young beaſts. The difference, in value of produce, taking wheat at nine ſhillings the buſhel, is no leſs than *ſixty-three ſhillings* an acre ſuperior to your home lands, and *five pounds ſeventeen ſhillings* ſuperior to your common lands. Valuing wheat only at five ſhillings and ſixpence the buſhel, ſurely a ſufficiently low price, my produce will exceed that of your common-field land *three pounds eleven and ſixpence*, and that of your beſt home land *one pound eighteen and ſixpence* an acre. Any one of theſe ſums will certainly pay handſomely for giving a clean fallow, inſtead of a foul one, and will afford a little ſheep feeding, at leaſt equal to yours, into the bargain.

To form the compariſon juſtly, it muſt be made with ſoils that are adapted for growing wheat, and under a judicious courſe of huſbandry. On very middling ſoils in this country, thirty buſhels an acre is conſidered as only a decent crop, after tolerably well-worked fallow. On good wheat ſoils, well fallowed, thirty-ſix to forty buſhels are frequently grown. Uncommonly good ſoils, in good ſeaſons, often produce forty-eight buſhels. I am informed that ſome very ſuperior ſoils in England have given fifty-ſix, and even ſixty-four buſhels an acre. Take theſe various products, reduced to a comparative table, at the preſent very high price of nine ſhillings the buſhel, and at the very moderate price of five and ſixpence, and ſee where the difference will be. You cannot fail to obſerve, that at any given

given price, the proportions will ſtand exactly the ſame. It is perhaps ſcarcely neceſſary to mention, that I uniformly aſſume the Engliſh ſtatute acre, and the legal Wincheſter buſhel.

		C.6	9	C.6	5	6
Your common-field land,	14 buſh.	£.6	6	£.3	17	0
—— home land,	20		9	0	5	10	0
My farm, after turnips led off,	27		12	3	7	8	6
Middling ſoil, plain fallowed,	30		13	10	8	5	0
Ditto, good ſoil,	36		16	4	9	18	0
Ditto, favourable ſeaſon	42		18	18	11	11	0
Ditto, ſoil and ſeaſon excellent	48		20	14	13	4	0
Very well managed ſuperior ſoils in the ſouth of England,	56		25	4	15	8	0
Ditto, every circumſtance in the higheſt degree of excellence,	64		28	16	17	12	0

I do not, by this comparative ſtatement, mean to inſinuate, that, by any ſuperiority of management, your ſoil can be brought to produce equal crops of wheat to thoſe of the moſt perfect ſoils, quoted in the foregoing table. I only hold it forth as a palpable example of what can be done in huſbandry, by dint of well-conducted fallow, and a judicious ſucceſſion of crops. But I have no heſitation in ſaying, that, in my opinion, your ſoil is capable of producing, under good management, crops conſiderably ſuperior to what my farm is able to grow; probably equal to what I may call the beſt middling ſoil of this country; perhaps, from thirty-ſix to forty-two buſhels an acre.

After an attentive conſideration of the foregoing comparative ſtatement, which I am certain is perfectly fair, I will aſk you, if any feed, which can poſſibly be procured by your ſheep from your ill-conducted fallows, can, in any degree, compenſate for ſuch a loſs as has been ſtated, on the immediately ſubſequent crop of wheat; not even to take into the account the ſucceeding and annual loſſes, which muſt neceſſarily be in, at leaſt, an equal proportion from the other crops which intervene before the next fallow?

You, perhaps, at leaſt your foreman, will aſk me, How your ſheep are to be kept, without the aid which the foul fallow

y contributes? My anſwer is, In the mean time, keep
r ſheep, until your land is brought round into the beſt
e of cultivation of which it is capable, and which I ſhall
wards endeavour to ſketch out for you. By means of
mode of cultivation and management, I am certain you
ld be enabled to keep, at leaſt, a half more ſtock of every
, and to grow double the quantity of grain and hay from
acre; and all this, at no additional expence, or, at leaſt,
increaſed expence for the commencement only; very far
ior, comparatively, with the advantages to be derived from
ior cultivation and management. After the land has
got round into good culture, and reduced into a proper
n of management, the future expence will become con-
ibly leſs than it is at preſent.
nuſt here obſerve, however, that the very great ſuperio-
in point of productiveneſs, which I have inſiſted on, is
o be derived ſolely from working your fallows better,
ugh even that improvement, in your practice, would do
at deal), but to render land fully productive in its ut-
poſſible extent, (and that ſhould ever be the object of the
ious and ſpirited huſbandman). This idea I ſhall have
ſion to treat of more at large, in the ſequel of theſe ob-
tions.
ie circumſtance, in the management of your fallows, I
ſeverely condemn. It is the practice of folding your
upon them, for the purpoſe of manuring the ſoil for
ucceeding crop of wheat. Your foreman aſſured me,
this is conſiderably ſuperior to any other mode of ma-
ig. It may be ſo; but I will aſſert, that your ſheep are
by injured, at leaſt, a crown for every ſhilling's worth
anure they produce in that way. Poor wretches! to keep
ſtarving, twelve hours of every twenty-four, cooped up
narrow ſpace, where they can hardly turn or lye down.
er, among the continually changing modes of faſhionable
s, *ſheep races* ſhould happen to become the rage, ſheep,
kept, in ſweats and out of fleſh, might be rendered very
r the courſe, but can never thus be fitted for the knife.
, &c.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On Working of Oxen.

'LEMEN,

HOUGH I am, upon the whole, partial to the employment
rſes, in carrying on the operations of huſbandry; yet,

my

my opinion is, that, *in all breeding countries*, oxen may be uſed with advantage, as moderate employment will not hurt their growth. In this part of the iſland, we uſe them in great numbers; and four oxen are conſidered as capable of performing as much home work as two horſes: but we ſeldom allow them to travel upon the road. It is our general cuſtom to break them in when three years old, and to turn them off to the feeding paſtures when they arrive at ſix years, as at that period they are come to maturity. This rule, however, is not always adhered to, as many farmers are governed by the mode of management practiſed, and the quantity of graſs in their poſſeſſion; others, by the fineneſs of their breed, as large oxen will not ſtand work equal to thoſe of a middle ſize. They are all yoked with us in the old way, *viz.* with yokes and bows, the expence of which does not exceed four ſhillings and eightpence, and, with care, will laſt for ſeveral years; and this mode, I believe to be ſuperior to the cuſtom of uſing leather collars, as practiſed in other places.

I obſerve, in the ſecond Number of your Magazine, an account of the way in which oxen are fed and uſed in his Majeſty's park at Windſor; and though I have not the leaſt doubt, but that they may anſwer there as well as horſes; yet, I queſtion, if a farmer could go on for any length of time, if he followed the plan there mentioned, or that the animals could live upon the quantity of food ſaid to be given them. It is right that great men ſhould try new plans, for a poor man has it not in his power; but ſuch experiments are generally puffed off in an advantageous way, and more ſaid than can be juſtified.

The expence of keeping oxen is conſiderable; though the general opinion *here*, is, that they are kept at leſs than horſes; which I do not conſider to be the caſe, when the extra number neceſſary for the work is taken into the account. The oxen devour the whole produce of the beſt land in the farm, *viz.* the hay fields; whereas, if that land was in oats, and horſes employed, the ſtraw would go a great way in their ſupport, while more corn would be brought to market. In Summer, oxen may be kept at leſs expence than horſes; but even then they muſt have a great tract of grazing land; and wherever they are kept in numbers, a very large proportion of the farm muſt be in graſs for their Summer and Winter maintenance. I have talked with ſeveral neighbours, whether they could be kept upon turnips and ſtraw during the Winter months? But they object to turnips, upon the ſuppoſition

ſuppoſition that the animal could not ſtand work on ſuch watery food; and unanimouſly think, that, without hay, they could not undergo the neceſſary fatigue.

Upon the whole, though I am clearly of opinion that oxen are equally capable of carrying on farm work with horſes, and that, in a *breeding country*, they may be uſed with advantage for three years or more; yet, ſo long as hay muſt be given for their ſupport in the Winter months, I am ſatisfied, that, in *general caſes*, no material ſaving will be gained by employing them in preference to horſes. I am yours, &c.

Glamorganſhire,
September 3. 1800. } A WELCH FARMER.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN, *Edinburgh, 7th Nov.* 1800.

I AM inclined, if it be agreeable to you, to anſwer the queries of your correſpondent, of New Galloway, as to the beſt method of Storing Apples and Pears for Winter uſe; and to give him a few hints as to Dioptrical Bee-hives. In doing this, I ſhall ſtudy brevity, that I may not take up thoſe pages deſigned for rural ſpeculations of greater conſequence.

In gathering Winter fruits, obſerve the following important preliminary obſervations, by Richard Bradley, F. R. S. "Such 'pears or apples as are fit to be gathered, will eaſily leave the 'tree; therefore uſe no violence to pull them off, for ſuch 'as do not willingly part from the tree, will ſhrivel, and have 'an inſipid taſte.' Apples in general ſhould have acquired a flavour, before they are taken off the tree. Pulling unripe fruits careleſsly, hurts the tree on which they grow. Suffer them, however, not to remain longer than the end of October; for they can get no good after that time.

The following approved directions for ſtoring fruit, are nearly in the words of the Gardener's Calendar, by Meſſrs Mawe and Abercrombie.

Take a dry day to gather your fruits; and let the trees and fruit be quite dry. The proper time of the day is from 11 till 4. Take care not to bruiſe your fruits. Put them in a very dry place in heaps. Let them lye together about a fortnight to ſweat. Then wipe them careſully, which makes them keep better, and improves their flavour. Next lay them upon clean ſtraw, two or three layers thick; but if there is not plenty of room, there may be ſeveral layers one upon another, covering the whole with dry ſtraw, a foot thick at leaſt, to exclude the damp air and froſt.

I hold no branch of rural economy to be more worthy of ſome degree of attention, than the rearing of proper orchards upon ſheltered ſpots of clay ſoil; for fruit trees do not thrive in ſoils of a gravelly bottom, or, indeed, ſo well in any light kind of ſoils. I know ſome orchards by the ſide of the Clyde, that yield an average profit of twenty pounds per acre, almoſt without labour. Many of them are hedged with plum trees, ſo that no ground is loſt; and choice fruit being thus rendered ſo common, is no temptation to nightly depredators.

I cannot help thinking we might imitate our ſouthern neighbours a little more in our cultivation of apples, though it is confeſſed, our climate is by no means ſo favourable as theirs. The apple (ſays the above-mentioned Mr Bradley) is of ſuch uſe in England, that I hold it impoſſible for the Engliſh to live without it; whether it be for that excellent drink we call Cyder, or the innumerable dainties afforded by it for the table.

As to Dioptric Bee-hives, the beſt I have ſeen is of wood, in the garden of Mr George Jarvey at Bathgate. The bees are ſeen at work in it by opening wooden ſhutters on oppoſite glaſs windows. Mr Jarvey takes out the honey as he needs it, by opening one of theſe windows, and the hive is perennial, as he never kills a bee. One on a ſimilar conſtruction, has been made ſome years ago for the writer of this account, by Mr Francis Clark, wright in Edinburgh, which anſwers very well. Care muſt be taken that theſe wooden hives be well covered with thatch, to exclude the cold air during Winter. I have ſuffered by not attending to this.

A. S.

FOR THE FARMER'S MAGAZINE.

Propoſals for a Chamber of Agriculture.

In all countries ardently engaged, and rapidly advancing in purſuit of the uſeful arts, a variety of queſtionable practices ariſe, and controverſies occur, altogether out of the reach of the ordinary eſtabliſhed courts, and over which the public cannot, except after a long tract of time, exerciſe any effectual juriſdiction. To beſtow upon the firſt a ſanction or cenſure, and to decide the ſecond by a more amicable determination, calls therefore to a tribunal exiſting only through its acknowledged competency in wiſdom to ſuch caſes, the conſent of individuals

The

The only two authorities of this kind in the iſland, are, the Chamber of Commerce for the mercantile intereſt, and the Jockey Club for matters of horſemanſhip. In agriculture, the Legiſlative Board, or the Farming Club connected with it, have not yet propoſed to themſelves any ſuch objects as are now in contemplation. Yet there evidently would be as much advantage as in merchandize, and far more than in horſemanſhip, to eſtabliſh one or more deliberative bodies, whoſe voice might recommend, encourage, and cenſure the queſtionable parts of agriculture; and, upon reference by a court of law or individuals, determine, as a jury, upon the caſes ſubmitted to them.

Such tribunals ſhould originate in the Board of Agriculture, which is the ſupreme authority of that kind in the country; the fellows to be compoſed, in part, of the honorary members of that body.

It ſhould conſiſt of three Chambers; one for England and Wales, a ſecond for Scotland, and a third for Ireland; whoſe climate, ſoil, and inſtitutions, widely differ; each of which ſhould have a power of creating *ſubordinates*, by counties, or larger diſtricts, according to locality of ſituation, or other circumſtances.

One indiſpenſable qualification of admiſſion ſhould be, the preſent enlarged practice of agriculture, or having ſo practiſed for a period of twenty bypaſt years.

The Chamber may originate in itſelf, *as guardians of agriculture*, motions and reſolutions tending to its welfare, by general or particular exhortation, encouragement and inſtruction, premium or cenſure.

The Chamber may promulgate its opinions upon the caſes in agriculture referred to it; it may pronounce *its verdict* upon the points referred to it by the courts of law; and, where theſe involve the practices of its ſubordinate diſtricts, or other quarters of the kingdom, it may delegate to theſe chambers, ſuch points as may be neceſſary for juſt deciſions.

It may proceed in the ſame way, in caſes ſubmitted to it by individuals.

Each national Chamber behoved to make a yearly report to the others of its proceedings, ſo far as affecting agriculture in general, and ſhould comment upon the reports it might receive, in caſe of difference of opinion.

Laſtly, The Chambers ſhall be the mediums of government, in all inquiries touching the agricultural ſtate of the Britiſh iſles.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

Upon examining the account of a plough for cleaning turnips, in your laſt Number, I am inclined to think, either that the deſcription is inaccurate, or the implement defective.

As repreſented in fig. 3. its operation can be neither better nor worſe than that of a common double mould-boarded plough. Its effect, as a paring plough, as in fig. 1. and 2. muſt be very imperfect; as the mould-boards, inſtead of throwing the earth into the hollow betwixt the two ridges, can only preſs it hard againſt their ſides. In order to pare properly, the mould-boards (ſo contrived as to hinge, in the way of band and crook, on either ſide of the ſheath) ſhould be reverſed from their poſition in fig. 1. and 2.; as alſo, the ſocks, *i. e.* the mould-board, there repreſented as upon the outſide of the right-hand plough, ſhould be placed upon the inſide of the left-hand one, and *vice verſa*, the ſocks being alſo interchanged; the mould-boards being ſet with ſuch an interval behind, as to allow the new-raiſed ridge (D D in the plate) to eſcape between them.

I have ſeen a ſingle plough for paring two ridges at once, whoſe deſcription would anſwer to that of the above, new-modelled as propoſed. The objection to it no doubt is, that if a ſtone enters betwixt the two mould-boards, too large to paſs through the narrow interval of their hinder parts, the motion of the plough is ſtopped. The motion may be even ſtopped, or greatly obſtructed, when the land is ploughed wettiſh, and eaſily kneaded adheſively together, which cannot always be avoided.

Every object propoſed by this complex, and ſeemingly awkward inſtrument, ſeems to be attained by a mode of dreſſing turnip *ſolely with a ſingle mould-boarded paring plough, drawn by one horſe*, which has for ſome time been practiſed by James M'Dougal, farmer in Linton, in this county, (the perſon taken notice of in the Statiſtical Account of Linton, vol. I., and in the Agricultural Report of Roxburgh and Selkirk ſhires). His mode is, to pare only one ſide of the ridge at one ploughing, and then, after ſome little interval, to pare the other ſide.

The practice is new here, and perhaps may be new elſewhere: if it is ſo, it may merit a particular deſcription, in caſe you judge it worth inſertion.

The

The turnip being ſingled by the hand-hoe, (which is the firſt operation after ſowing *), and which is ſet about ſo ſoon as the turnip puts forth the rough leaf †, the pare ploughing immediately begins; which, for the ſake of diſtinctneſs, though at the hazard of prolixity, may be thus deſcribed.

We ſhall ſuppoſe the turnip ridges to lye in the direction of eaſt to weſt, and that the operation is begun from the eaſt end of the ridges, and north ſide of the field. The ploughman counts off to his right hand, on the north, a certain number of ridges, ſuppoſe ſix: he enters upon the ſeventh ridge, and, going weſt, pares a furrow-ſlice from the north ſide of ſaid ridge: turning left about, in returning eaſt he pares a furrow ſlice from the ſouth ſide of the ſame ridge; which ridge we ſhall therefore denominate *the feiring ridge*. In continuation, in going weſt he takes a ſingle furrow-ſlice from the north ſide of each of the ſix ridges lying to the north of the feiring ridge; and, in returning eaſt, he takes a furrow-ſlice from the ſouth ſide of other ſix ridges lying to the ſouth of the feiring ridge. Having thus completed one *pitch of work*, (if you will allow me to borrow a phraſe from the water flooders), conſiſting of the feiring ridge, and ſix on either ſide of it, in all thirteen ridges, he feirs anew for a ſimilar pitch, till he has gone over the whole field.

So ſoon as the weeds buried by this firſt ploughing may be ſuppoſed rotted, the operation is repeated, in a reverſed manner, upon each pitch of work; that is, (in beginning, as before, at the eaſt end of the ridges), a furrow-ſlice is taken, in going weſt, from the north ſide of the ridge lying ſouth of the feiring ridge, and applied to the ſouth ſide of the feiring ridge; and, turning right about, in returning eaſt a furrow-ſlice is taken from the ſouth ſide of the one next the feiring ridge on the north, and applied to its north ſide; and, in this manner, a furrow is pared from thoſe ſides of

* Some pare the ridges with the plough, before ſingling. As the turnips are, however, thus brought to ſtand upon a very narrow ridge, and eaſily overſet, this greatly obſtructs the freedom and expedition of the operation of ſingling with the hoe, and the practice is generally condemned.

† The ſlug or fly, which is often ſo deſtructive to the plants upon their firſt appearance, does not attack them after putting forth the rough leaf. It may be worth obſerving, that the ſecurity uſed in this county againſt this ſpecies of vermin, is to ſow thick, at the rate of 2½ to 3 lib. of ſeed, or more, to the Scots acre, that a ſufficiency of plants may remain, though the vermin ſhould deſtroy the greater part. Our ſecurity againſt drought, is, ſowing deep, by lengthening the coulter of the drill barrow. We indeed generally ſow them from two to three inches deep.

all the ridges in the pitch which were left untouched at the firſt operation.

This mode of ploughing is continued ſo long as the ſtems of the turnips will allow of the paſſage of the plough: *And they are never ſet up at all.*

Care is taken, at each paring, to keep the plough as near as poſſible to the turnips growing upon the pared ridge. And, by this, two purpoſes are gained: *firſt*, The greateſt poſſible quantity of weeds is taken from the plants ſtanding upon the pared ridge: *ſecondly*, A ſize of furrow-ſlice is raiſed ſufficient to overlap or whelm up all the weeds growing in the interval betwixt the drill of turnip on the pared ridge, and the drill on the ridge, upon whoſe firm and untouched ſide the furrow-ſlice is turned over. It may here be obſerved, that, as only one ſide of the ridge is pared, and the other left firm, you can conſequently bring the plough nearer to the turnip, than if both ſides were pared at one operation, without riſk of overſetting the earth on which the turnips ſtand.

If the whole weeds are equally well buried at each operation, as by paring, at each operation, both ſides of the ridge, ſo as to raiſe the new ridges, (D D in the plate), which M'Dougal aſſerts to be a fact conſiſtent with his experience; it is evident that each operation as above, performed by a ſingle horſe, is equal, both in point of effect and of expedition, to one operation of dreſſing, performed by two horſes, with your double paring plough; beſides the advantage juſt mentioned of M'Dougal's method, of your having it in your power to carry the plough always much nearer to your plants.

In M'Dougal's opinion, the turnips thrive better *when not ſet up*. The ſheep alſo (to the feeding of which, incloſed by nets on the field, he applies his turnip) get better at them: moreover, the ſheep have eaſier footing, and more comfortable lying, when the ground is thus left more flat.

The ſoil of M'Dougal's farm is light ſand, free of ſtones: the interval betwixt his turnip drills he keeps at about thirty inches at moſt.

I am yours, &c.

Tweedale. C. F.

Remarks on the above by the Conductors.

We ſuſpect our ingenious and reſpectable correſpondent has miſunderſtood the nature and conſtruction of the double turnip

turnip plough; and this ſuſpicion is confirmed by ſome of our other friends having formed erroneous ideas reſpecting the manner in which it operates. As repreſented in fig. 3. p. 414, 1ſt vol. it is neither more or leſs, than a double mould-boarded plough, by which the new raiſed ridge (D D in the plate) may be ſplit or divided, and laid to the root of the plants: Mr S. E. gives it no other character. According to fig. 1. (which is a very perfect repreſentation of the implement), both the ſides of a drill are pared, or laid away, at one time; and, when the plough returns, the new ridge *(D)* is formed, and the turnips left ſtanding on *C*, as deſcribed in Mr S. E.'s letter. In this way, the earth thrown into the intervals *is not preſſed hard againſt the ſides of the drills*, but remains in the like looſe ſtate as when the operation is performed by a ſingle plough, while twice as much work is executed in a given time. We have ſeen the double plough at work, which enabled us to judge of its utility. Upon this head, there can be no doubt entertained, where the ground is ſoft, and free from ſtones; but we muſt remark, that the ſkim plough, provincially called a *ſcraper*, will do as much work, under ſimilar circumſtances, though perhaps with leſs effect.

With regard to Mr M'Dougal's method, of paring only one ſide of the drill at a time, with a ſingle plough, and leaving the other untouched for ſeveral days, we think it attended with many important advantages. The plough, in this way, may go much nearer to the plants; the drought has not ſo much impreſſion on their growth; and the land enjoys greater benefit from the ſun and wind, by being ſtirred different times, than when the earth is immediately thrown back into its firſt bed, according to the common cuſtom. The firſt and laſt of theſe advantages may be procured by the double plough; though, as every ſecond drill would, in conſequence, be pared on both ſides, it would be impoſſible to gain the ſecond.

It has been our general cuſtom, for ſeveral years, to clean *beans* in the above way. Suppoſe the ridge lies eaſt and weſt, our method has been, to gather up the ridge when the firſt ploughing is given, *i. e.* to pare the ſouth ſide of the drill, next to the crown or top of the ridge, beginning at the weſt end; and, returning from the eaſt end of the field, the drill on the other ſide is pared away in like manner, and ſo on, till the whole ridge is finiſhed. After going over the ſeveral fields in this manner, the ſecond furrow is given, by leaving down the ridge, *i. e.* by beginning at the weſt end

of the drill next the hollow furrow upon the ſouth ſide of the ridge, returning upon the north ſide; and ſo on, till the plough arrives at the crown of the ridge. In ſome ſituations, it is perhaps better to plough two ridges at once; otherwiſe, the drill upon the top of the ridge does not get the ſame work as the others; but, in this way, the head lands are much injured by the greater ſweep taken by the horſe, when employed in the action of turning. When the beans are at a proper age, they are bulked up in the ſame manner as already deſcribed, with this difference, that the earth is then laid cloſe to the plants each time, inſtead of being taken from them, as practiſed when the two cleanings are given.

The advantages attending this mode of culture, will be eaſily diſcerned. The earth removed from the plants in the firſt inſtance, when they are young and eaſily injured, is always laid to the height; and, when the ſecond cleaning is given, they are not only more vigorous and ſtrong, but the hollow made by the firſt furrow affords a bed for the earth then turned up. It is likewiſe neceſſary, that each furrow ſhould be taken deeper than the preceding one, according to the ſtrength of the crop, and the condition of the ground. Beans can hardly receive too much work, if it is applied with judgment; and the beſt and ſteadieſt ſervants ought to be ſelected for that department. The great object of this crop, upon heavy ſoils, is, to prevent a frequent repetition of naked Summer-fallow. With good culture, and a ſuitable application of dung, this expenſive, but neceſſary proceſs, may, in moſt places, be conſiderably curtailed, and the ground kept in a fertile and productive ſtate.

N.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On the Culture of Carrots.

GENTLEMEN,

THE culture of carrots in the fields has been a cuſtomary practice in England, particularly in the county of Suffolk, for a great number of years; and the advantages derived from this root, as an article of food for the working ſtock, are ſufficiently aſcertained by the farmers in the diſtrict above mentioned. The original object of cultivation was, to ſupply the London market; but the huſbandry having ſpread

ſpread in other parts, a greater quantity was raiſed than could be vended in this manner. Trials were therefore made, whether carrots could be uſed with advantage in the feeding of horſes; and the reſult eſtabliſhed their utility beyond contradiction.

In Scotland, this branch of huſbandry has hitherto been ſeldom practiſed; though, I entertain the hopes, that, upon deep ſandy ſoils, it will ſoon be generally adopted. As a proof that both our ſoil and climate are favourable to the carrot huſbandry, I beg leave to communicate the reſult of a trial, made laſt ſeaſon, by a near neighbour, who poſſeſſes a farm in the county of Eaſt Lothian.

The ſoil of the field, upon which the carrots were ſown, was of a light nature, ſomething like the Suffolk ſands; and, I believe, the field had carried two crops ſince it was ploughed from graſs. About the firſt week of May, the carrot ſeed was ſown in drills, with intervals of 16 inches, which were cleaned by the ſhooting-hoe, and thinned by the hand. The crop was good, conſidering the exceſſive drought, weighing at the rate of 675 ſtones per Scots acre, and the greateſt part of it was ſold at 18d. per ſtone, or 50l. 12s. 6d. per acre. No doubt the value was chiefly occaſioned by the particular circumſtances of the times; though the weight, which is the true criterion, demonſtrates the advantages which may be gained, even at one fourth of that price.

In Suffolk, carrots are commonly ſown in the broad-caſt way, but I muſt conſider the drill ſyſtem as infinitely preferable. A principal object to be attended to in the cultivation of turnips, cabbages, and other crops of the leguminous tribe, is, that the ground be ſufficiently cleaned; and this is more deciſively attained by the drill huſbandry, than under the moſt perfect broad-caſt management that can be practiſed.

I am yours, &c.

A FARMER.

FOR THE FARMER'S MAGAZINE.

Abſtract of the Syſtem of Agriculture, purſued in his Majeſty's Farms in Windſor Great Park, as communicated to the Society of Arts, and printed in the Tranſactions of that Society, for the year 1799, by Nathaniel Kent Eſq.; with Remarks by a Correſpondent.

IMPRESSED with the higheſt veneration and loyalty for the KING, I hope not to deviate from duty, or reſpect, in offer-

ing ſome remarks on the abridgement of Mr Kent's account of the Royal Agriculture. Having lately ſeen that gentleman ſtyled, in the newſpapers, his Majeſty's principal agriculturiſt, I ſhall therefore preſume, that the practices now to be reviewed, are dictated by his counſels.

There are two diſtinct farms: one named the Norfolk farm, becauſe, in it, the Norfolk ſyſtem of huſbandry is imitated; and the other, the Flemiſh farm, as the agriculture of Flanders was originally intended to have been its pattern, although the actual plan reſembles more the practices of ſome parts of Glouceſterſhire.

The Norfolk farm conſiſts of a thouſand acres of light ſoil. We are informed, that it is divided into five portions, of an hundred acres each, and managed under the following rotation, or courſe, of five years.

Firſt year, turnips. Second year, barley or oats, ſown off with clover ſeed. Third year, clover; which is broken up after harveſt, and ſown with wheat. Fourth year, wheat. The fifth year, forty acres out of the hundred are ſown with vetches, to be fed off; forty acres, in the end of Auguſt, are ſown with rye, for early feed, next Spring, to ewes and lambs; the remaining twenty acres are planted with potatoes; and the whole hundred acres are worked for turnips next year.

In this account, half the farm is altogether omitted, as only five hundred acres out of the thouſand are accounted for. Moſt probably, theſe forgotten five hundred acres are kept conſtantly in hay ground, or perennial meadow. I cannot avoid putting in a ſolemn proteſt againſt the Engliſh ſyſtem of continual meadow, eſpecially on turnip ſoil. It robs the arable land of a great portion of the dung or manure, which ought to be employed for the production of active crops; and it, by no means, produces the ſame quantity, or value of food, for man and beaſt combined, which can be readily drawn from the ſyſtem of alternate paſture and aration *.

The account given by Mr Kent is, in many reſpects, very unſatisfactory. We are not told what crops get manure, nor whether

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* *Note by one of the Conductors.*

We cordially agree with the ſentiments here expreſſed by our intelligent correſpondent. Conſtant graſs, or conſtant cropping, is the bane of Engliſh huſbandry, occaſioning a deficiency of produce, perhaps amounting to one fourth of what is actually raiſed upon ſuch ſoils as are here deſcribed. No valid excuſe can be offered, in mitigation of ſuch practices; eſpecially under the circumſtances of the caſe, where no third perſon has a right to interfere.

N.

whether the turnips be ſown in drills, or broad-caſt; neither is it ſaid that they are hoed. We are told, indeed, that this farm has not yet been marled, or *clayed*; though marl, or lime, or chalk, is an almoſt indiſpenſable requiſite in the Norfolk, or turnip huſbandry *.

Were I to preſume to counſel his Majeſty, or rather to adviſe his principal agriculturiſt, how to carry on this farm to the beſt advantage, which, from tolerably ſucceſsful experience, on highly rentalled turnip ſoil, I am not altogether unfitted for; I would propoſe to divide the thouſand acres into about twenty-four fields, of about forty acres each, and to manage the whole under a rotation of ſix years; ſo that a ſixth part of the whole farm, or about an hundred and ſixty-ſix acres, or four of theſe incloſures, ſhould belong to each year's ſhift or crop.

Beginning this ſix years courſe, with four of the incloſures broken up for graſs—The firſt year would be oats. The ſecond year turnips in drills, well manured with rotten dung, and carefully hand and horſe-hoed. In the third year, ſo much of the turnip land as has been eaten off by ſheep by the firſt week of February, may be ſown with wheat, as faſt as a fit portion is laid bare: ſo much as is employed after that period, ſhould be ſown with barley, and the whole ſown off with a mixture of rye graſs, clover, white clover, trefoil, and rib graſs. In the fourth year, a part of the clover crop is to be cut green for the work horſes and cows of the farm, and a ſufficiency reſerved for hay, to ſerve through the Winter; the aftermath of both being paſtured by ſheep. The fifth and ſixth years muſt be entirely devoted to paſture, and that principally with ſheep.

In the ſecond year, immediately before drilling up the ſoil to receive the dung, or in the third year, immediately before giving the ſeed furrow for the barley, the land ſhould get a complete dreſſing of fallen or ſlacked quicklime, in the proportion of an hundred and ſixty Wincheſter buſhels of newly burnt lime to the ſtatute acre. This gives, eſpecially on ſoils which have not received this amelioration before, a wonderful

* *Note by one of the Conductors.*

As it is upon the ſolid foundation of manures, that every ſyſtem of good huſbandry muſt be built, we conſider every rural detail, which does not ſpecify the quantity and quality of the manure applied, to be materially defective. To mention, that turnips are cultivated, and not to ſay, whether they are ſown in drills, or broad-caſt, or even whether they are hoed, is an inſtance of negligence we would not have expected from ſuch an eminent agriculturiſt.

N.

wonderful fertility for the production of crops, eſpecially of turnips and clover; and, by affording a vaſtly greater weight of ſtraw for the fold-yard, enſures the after abundance of every kind of produce, by augmenting the quantity of home-bred manure.

In the ſeventh year, the three year old *lea* is broken up for oats; and thus begins anew the ſix years courſe. Such vetches and potatoes as are required, are to be deducted out of the oat crop.

I have no heſitation in affirming, that this ſyſtem will triple, if not quadruple, the quantity of turnips produced by the plan which Mr Kent has deſcribed. It will likewiſe greatly increaſe the product of grain, and of beef and mutton. It will, indeed, diminiſh the quantity of hay, which I ſuppoſe to be produced from the five hundred acres of meadow: But, as the ultimate end of the farmer is profit, and the chief object of agriculture ought finally to be the production of food for man, (that is, grain and butcher meat), there can be no doubt regarding the preferable ſyſtem of huſbandry; that indicated by Mr Kent, or that which I have endeavoured to ſketch out *.

In a future Number, I ſhall give an account of the ſyſtem purſued on the Flemiſh farm, and ſhall inſtitute a compariſon between the uſe of oxen, as ſtrongly recommended for huſbandry work by Mr Kent, and the employment of horſes in agricultural labours; which latter is vaſtly more economical to the farmer, and admits of a very great deal more of diſpoſeable produce, in grain, and beef, and mutton; and is, conſequently, infinitely more advantageous for the public at large, as well as to the private occupier of the ſoil.

R r r r.

FOR THE FARMER'S MAGAZINE.

Sketch of a Tour through the Northern Parts of Scotland, in 1800.

PART I.

Upon Saturday, the 26th July 1800, we left Edinburgh, and enjoyed a pleaſant ride to Queensferry, where we took a

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* *Note by one of the Conductors.*

Reſpecting the ſuperior advantage of the ſyſtem ſketched out by our correſpondent, in preference to the one adopted by Mr Kent, a ſingle doubt can hardly be entertained. Not only the proprietor, but alſo the public, ſuffers under ſuch imperfect management; and this laſt conſideration is an object of great magnitude, under preſent circumſtances. N.

a boat for the oppoſite ſhore. The crop adjoining the road was, in general, middling; and few fields in our ſight appeared to be kept in what is uſually ſtyled a huſbandman-like condition. We ſaw only one field of turnips; and the ſmall quantity of Summer-fallow diſcernible from the road, remained, at this advanced period of the year, very imperfectly cleaned. This remark was particularly applicable to a field, at a place called N— C—, where dung was applied amid mountains of wreck, or couch graſs. Under the preſent ſtate of rents, and value of labour, it is an important affair to get Summer-fallow ſufficiently cleaned, ſo as the unproductive year may be removed to as great a diſtance as poſſible. One ſingle additional ploughing, nay, even a picking of the roots with the hand, will, in ſome caſes, give two additional crops; or, in other words, afford an opportunity for extending the rotation of crops, two years longer than otherwiſe would be practicable, conſiſtent with good huſbandry.

The potato crops looked well, but, in many inſtances, were far from being properly dreſſed. Perhaps the farmers in this diſtrict, truſt too much to this root, as a fallow; and indeed, if the potato huſbandry over the whole iſland, be minutely examined, it will uniformly be found very imperfect. From the nature of the cultivation, it muſt neceſſarily be ſo: The ground cannot be properly wrought before the time for planting arrives; the dung commonly applied to the crop, encourages the growth of every weed; while the time allowed for cleaning, does not admit leiſure to eradicate them: Add to this, that a freſh growth of weeds uſually appears between the cleaning ſeaſon and the end of Autumn, when they are taken up; and the previous bad condition of the ground is generally made worſe, if a fall of rain ſets in before it is properly ridged up. All theſe circumſtances contribute to render the cultivation of potatoes unfavourable to good huſbandry; though, we confeſs, they will operate in different degrees, according to the attention beſtowed in executing the ſeveral proceſſes of management.

After a few minutes ſtay at the North Ferry, we proceeded to Kinroſs, which is a ſtage of 15 miles. The roads were diſagreeably duſty, and the weather inſufferably hot; circumſtances not tending to promote the pleaſure of our journey, eſpecially through a diſtrict generally barren and unproductive. In the vicinity of Inverkeithing, ſeveral fields in decent order are to be found; but the general nature of the ſoil, from the North Ferry to Kinroſs, is of an inferior deſcription,

tion, though, where tolerable management was practiſed, the crop upon the ground ſeemed middling good, only ſuffering from the exceſſive drought. Very few turnips are cultivated; but potato fields abound on every hand; and the quantity of land carrying hay, was greater than we have witneſſed in any other diſtrict, while the crop was far from being defective. About Kinroſs, the quality of the ſoil improved conſiderably, which will always be the caſe in the neighbourhood of every town, or large village. One general remark may be made upon the extenſive tract now deſcribed, *to wit*, that if it is ever to become fertile and productive, the ſize of the farms muſt be conſiderably increaſed; for, in the hands of ſmall poſſeſſors, it is impoſſible that the natural ſterility of the country can, in any material degree, be removed.

Kinross is a ſmall, but thriving place, where, in former times, cutlery articles were manufactured. The loch in the neighbourhood of the town, from the number of trout which it yields, is beneficial to the inhabitants; but if a thorough drainage was practicable, this would be much more than compenſated to the public, by the large proportion of valuable ground which would conſequently be gained. The land from hence to the Ochil hills, except about Milnathort, is of a mean quality; and the preceding remark is equally applicable to its improvement. Croſſing the Ochil hills, we entered Strathern, and found immediately every circumſtance altered. The ſoil is generally of excellent quality; next to the hills it is moſtly a ſtrong loam, incumbent upon a retentive bottom. As we advanced to the Bridge of Earn, it became of a lighter nature, while the face of the whole diſtrict wore a delightful appearance, though the ſeveral crops were much below what might have been expected under theſe favourable circumſtances. Fine graſs fields about the houſe of Moncrief, upon which large flocks of cattle were depaſturing. Theſe are the moſt regular grazing fields we have ſeen north of the Forth; they appear to have been laid out with judgment, and preſent a rich proſpect for breaking up with the plough, when the proprietor is diſpoſed to permit them to be cultivated.—From hence to Perth, the corn fields were much injured by the drought, which indeed is equally the caſe with the whole country through which we have paſſed.

Deſcending the hill above Perth, the ſcene before us was one of the fineſt that can be imagined—the Tay meandering through a beautiful country—a large town upon its banks—ſhips, either ſailing with the tide, or waiting its return—

turn—villas and gentlemens ſeats on all hands—extenſive fields of graſs, called the South and North Inches, together with the fertile diſtrict of Gowrie, ſtretching away as far as the eye could reach; all theſe delightful circumſtances appearing at once, render the deſcent of Moncrief-hill peculiarly agreeable to every traveller, and exceeds any view of the like nature in North Britain.

PERTH is an ancient town, and regularly built, conſidering its antiquity. Situated nearly at the mouth of the Highlands, and upon the banks of a navigable river, it enjoys an extenſive inland, and ſome foreign trade; which appear to be daily increaſing. The beautiful river Tay takes its courſe cloſe by the houſes; and the oppoſite ſide preſents a moſt pleaſant proſpect. A noble and elegant bridge was erected, about thirty years ago, acroſs the river; which is of ſuch excellent workmanſhip, as, in all human probability, will long baffle the effects of every ſtorm. The ſituation of the town is rather low, which neceſſarily renders it damp, and expoſes the inhabitants to much danger when the river riſes, eſpecially at the breaking of a froſt ſtorm. The oppoſite ſhore is free from theſe inconveniencies: a number of houſes are already built there; and it is likely, as Perth increaſes in trade and population, that the *Bridge-end* will be the ſpot choſen for erecting the neceſſary buildings.

We viewed the artillery barracks, formerly the reſidence of the noble and powerful family of Gowrie. To a contemplative mind, ſuch a view preſents a ſtriking inſtance of the uncertainty of all ſublunary poſſeſſions. That the chief of a potent family, poſſeſſed of a large and valuable property in the neighbourhood, chief magiſtrate of the place, enjoying a great ſhare in the political influence of his country, the favourite of his fellow-citizens, and a man of eminent literary talents—ſhould, in one day, nay, even in one hour, be overturned, from almoſt the pinnacle of human greatneſs, and his family annihilated, were circumſtances to be produced by no common or ordinary cauſe; yet the real one ſtill remains a myſtery, and probably never will be clearly aſcertained.

After examining Perth, we rode up the eaſt bank of the Tay, for ſix miles, and breakfaſted with Mr B., a gentleman of great intelligence in rural matters. What a pleaſure is it to the traveller, when he fortunately falls in with a perſon poſſeſſed, not only of information, but alſo of ſuch liberality of ſentiment, as induces him to communicate freely his remarks upon the ſtate of ſociety, and the practices of mankind! Such

Such we found this gentleman to be; and need ſcarcely add, that we experienced the moſt flattering reception at his houſe: We were only ſorry that the time allotted to our journey would not ſuffer us to enjoy his company longer.

Both corn and graſs were ſuffering in a feverer manner in this tract, than in any other we had then examined. Some fields indeed were almoſt burnt up. Little wheat is ſown above Perth. Some extenſive bleachfields, filled with linen cloth, are on the water ſide; for which the ſituation and quality of the water is well adapted.

Returning by Perth, we travelled down the Carſe of Gowrie to Dundee: which preſents as fine a rural landſcape as can be ſeen in Great Britain.—Other diſtricts may be wooded and watered in a ſuperior way; they may have more incloſing, more elegant houſes, more natural beauties; but few or none of them have ſo much real good ſoil, in proportion to the extent, or are cultivated with equal diligence and judgment. The Carſe of Gowrie, acre for acre, is perhaps of greater value than any other part of Britain; at leaſt, it is more generally productive, and pays a greater rent to the proprietors.

The weſt end of the Carſe is a ſtrong tenacious clay, requiring dexterous management, eaſily hurt by rain, and, in croſs ſeaſons, hardly to be guided by the moſt ſuperior cultivator. Notwithſtanding theſe circumſtances, it is more adapted to the growth of corn than graſs, unleſs it be red clover, which here thrives amazingly for one year, but, as upon all ſtrong ſoils, does little good afterwards. The rotation of crops uſually followed out, is, 1*ſt*, A complete Summer-fallow; which is ſown with wheat, if the ſeaſon will by any means permit. This crop, unleſs in very unfavourable years, is uſually very productive as to quantity, though the quality, we believe, is generally conſidered, by bakers, as inferior to what is raiſed upon drier and more kindly ſoils. The next crop is commonly beans and peas, ſometimes drilled, but oftener broad-caſt; which, in ordinary ſeaſons, are generally very luxuriant, and ſerve as a fine preparation for barley and clover; which, according to the moſt approved ſyſtem, ſhould be ſown the third year after the Summer-fallow; but, we believe, that, in favourable Winters, wheat is again reſorted to. If the proper rotation is adhered to, a clover crop is taken after barley: this is ſucceeded by oats, which finiſhes the rotation. Such a courſe of crops is admirably adapted to ſtrong clay land, where the ſoil is rich; but we could obſerve, that the badneſs of the weather laſt year had rendered croſs cropping inevitable. A number of the fields intended for—

wheat

wheat, had not been got ſown; others, which had been ſown, were ploughed up again, and a crop of Spring corn taken in its ſtead. This neceſſarily occaſioned a greater ſpace of ground to be occupied with oats than cuſtomary; and perhaps contributed to throw the Carſe huſbandry into ſuch an irregular ſtate, as will require the effects of ſeveral favourable ſeaſons to rectify.

As we advanced eaſtward, the ſoil of the Carſe became gradually lighter, till at laſt it proved an excellent deep loam, which undoubtedly is the moſt valuable of all ſoils. About Inchture and Longforgan, the land is of a ſuperior quality, and much ſurer for every crop than what it is further weſtward. This was evident, from the crops of every variety having only partially failed in the eaſtern parts; whereas, upon the ſtrong tenacious clay, the crop appeared infinitely more defective. The ground, in the laſt caſe, was completely ſoaked with water during the Winter months, and afterwards baked into brick by the hot ſun and the inceſſant drought which prevailed through the whole of Summer, and retarded the progreſs of the crop in every ſtage. In the other caſe, neither the wetneſs nor the drought operated ſo ſeverely; nor was the nouriſhment of the plants materially curtailed. Numerous fine fields of grain were here to be ſeen, though of far leſs bulk than thoſe we have formerly viewed in this fertile diſtrict. Under equal management, a material difference would neceſſarily happen betwixt the crops of the eaſtern and weſtern parts of the diſtrict, in ſuch a year as the laſt; for the weather, from Lammas 1799 for twelve months thereafter, was more favourable to the cultivation of clays, than during any period within our remembrance.

The Carſe ſoil ſeems ill adapted to the cultivation of potatoes; for, in nine caſes out of ten, the crops of that root, that came under our obſervation, were worſe than thoſe of any other diſtrict. Some of the clover fields were good, and admitted a ſecond cutting; which, we believe, was hardly practicable at the time in other places. From the moſt correct information we could procure concerning the ſeveral crops, they could not be conſidered as exceeding three-fourths of thoſe commonly raiſed. Barley appeared to be the beſt—Peas good—Beans indifferent—Oats not bulky—and Wheat, except in a few places, worſt of all.

The public roads through the Carſe, formerly notoriouſly bad, are now repaired in a ſuperior ſtyle, and free communication is gained in every quarter. For this neceſſary improvement, without which every other would have been more

difficult

difficult to attain, great praiſe is due to ſeveral public-ſpirited gentlemen, who eagerly perſevered till ſuch an arduous undertaking was accompliſhed. By their exertions, the value of property is not only conſiderably increaſed, and the comfort of the inhabitants promoted, but travellers can ſafely paſs through a diſtrict, which, in former times, was nearly impervious during one half of the year.

DUNDEE is a town of great extent, carries on a conſiderable trade with foreign parts, is provided with ſeveral thriving manufactories, and is the reſidence of many wealthy people. The ſoil of the neighbourhood is of a light deſcription, well calculated for potatoes, turnips, barley, and graſſes; and the management practiſed is fully equal to what is followed out in ſimilar ſituations, where agriculture is rarely the principal object.

From Dundee to Glamis, in Strathmore, there is much high and barren land; but generally kept under decent management. At Glamis, we waited upon Mr M., an active and enterpriſing farmer; who not only gave us a ſatisfactory account of his own improvements, but alſo communicated ſuch information as we requeſted, concerning the general ſtate of huſbandry in the neighbourhood. He politely ſhewed us the houſe or caſtle of Glamis, upon which ſeveral repairs are preſently making; and, in every reſpect, treated us with the greateſt urbanity. We here ſaw large fields of good turnips, and an extenſive field of hay, of ſuperior weight to any we had viewed in our progreſs. Mr M. has an excellent ſtock of working horſes—they are well matched, of a ſtout make, and ſuperior to thoſe uſually kept by operative farmers. The ſoil about Glamis is generally of a good quality; and a ſpirit for improvements ſeems to prevail, in an extenſive degree, among the Angus farmers; which we noticed with pleaſure.

FORFAR is the county town of Angus, and poſſeſſes a tolerable ſhare of the linen trade. The land, from Glamis to this place, was generally under good management, and improvements greatly forwarded, by the aſſiſtance of marl, procured in the neighbourhood. Not a great deal of the ſoil appeared capable of ſupporting an extenſive rotation of corn crops; but the poſſeſſors have, with much judgement, ſeduouſly turned their attention to the graſs huſbandry; which, in this tract, is managed in a ſpirited manner. This is the only method by which aration can be rendered profitable upon thin ſoils; and ought to be imitated in ſimilar ſituations. With a few exceptions, the land of North Britain cannot be profitably

profitably employed in raiſing a ſucceſſion of corn crops.—The expence of labour eats away a large ſhare of the produce; and, unleſs full crops can conſtantly be gained, the profit of ſuch a ſyſtem is inconſiderable. Perhaps it would be advantageous, upon nine-tenths of our arable land, to have one half of it in graſs; which, being frequently broke up, and laid down in a few years with freſh ſeeds, would inſure full returns, and preſerve the land in a fertile and productive ſtate, while the expence of labour would be conſiderably abridged.

(To be continued.)

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

IT will be extremely agreeable to many of your readers in this county, to receive information relative to the beſt method of uſing lime, and the different ſoils on which its effects are moſt diſcernible. I ſhould likewiſe be happy to learn, from any of your gardening correſpondents, how gooſeberry buſhes may be ſaved from the ravages of the caterpillar.—With hearty wiſhes for the ſucceſs of your uſeful Publication,

I am, Yours, &c.

Aberdeenſhire, Dec. 31. W. C.

PART II.

REVIEW OF AGRICULTURAL PUBLICATIONS.

General View of the Agriculture of the County of Lincoln. Drawn up for the conſideration of the Board of Agriculture and Internal Improvement: By the SECRETARY *to the Board.* 8*vo*, 454 *pages. London,* Nicol *and others; Edinburgh,* Creech.

MR ARTHUR YOUNG, who amuſed and inſtructed us in our younger days, by his rural writings, is the author of this work: Indeed, whether the title-page had afforded us this information or not, the work itſelf contains intrinſic evidence

of the ſource from whence it proceeded. We obſerve the ſame deſultory way of writing, the like chaos of materials, and a ſimilar quantity of political arithmetic, as characterize this gentleman's other performances. Conſidering the number of years he has been employed in ſuch inveſtigations, the public might have ſanguinely expected a perfect view of the Lincolnſhire huſbandry, eſpecially as the author had a full command of official information. It ſhall now be our object to aſcertain, whether theſe expectations have been gratified.

Lincolnſhire is a county of great extent, containing nearly two millions of acres; and is capable of receiving a greater degree of improvement than many other diſtricts. It was ſurveyed, in 1793, by a Mr Stone, whoſe account probably gave diſſatisfaction; for we remember of a ſeries of animadverſions being publiſhed upon it in a provincial paper. Whatever cauſe prevented the Board from employing Mr Stone to make up an amended report of the rural economy of this county, Mr Young was directed to ſurvey it afreſh; and the reſult of his inquiries is now to be examined.

The firſt ſtroke of Mr Young's pen is uſed to arrange the county into arbitrary diviſions, ſuch as *Wold*, *Heath*, and *Miſcellaneous Tracts*. For this purpoſe, a map of the ſoil is ſketched out—we preſume, from imagination; as it is impoſſible that ſuch an arrangement could have been executed with any meaſure of exactneſs, in the ſhort time devoted to the buſineſs. From this map, the number of acres of each kind of ſoil is calculated.

We ſhould ſuppoſe, the great line of diſcrimination in this county, is the lower and higher diſtricts. The former, where tolerably drained, carries rich crops both of corn and graſs; while the latter contains not only a large quantity of fine dry land, but alſo a conſiderable tract of a very inferior nature, carrying little but heath and gorſe, and feeding no other animals but rabbits. This high diſtrict is notorious for containing a great number of common fields; which are kept under ſuch wretched management, as will prevent them from yielding one fourth of their real value, before they are divided, and held in ſeveralty. We give this deſcription from perſonal obſervation, having lately examined the diſtrict with conſiderable attention; and, if called upon to ſay, in what reſpect is Lincolnſhire moſt ſuſceptible of improvement? we would at once reply, Drain the low lands, and root out the common fields, and you will have one of the richeſt diſtricts in the kingdom. Let us ſee, whether Mr Secretary views the buſineſs in this light.

In

In the firſt chapter, we are preſented with a dry detail of circumſtances reſpecting the face of the country, climate, ſoil, and water; which is given in a moſt heterogeneous manner. The ſecond chapter treats upon the ſtate of property; wherein a variety of unconnected facts, apparently copied from looſe minutes, are heaped together in a maſs, and ſerved up without further trouble;—as, for inſtance, take the following paragraph, which is exactly in the author's common ſtyle.

"On the incloſure of Barton, there were above 120 proprietors. About a third of the pariſh poſſeſſed by the two Mr Grayburns. Some owners have one to three hundred a-year; and abundance of ſmall proprietors, themſelves the occupiers."

In ſection 2d of this chapter, the following *intereſting* and *valuable* information is communicated:

"At Thong Caſtor, at Whitſuntide, the lord of the manor has a right to whip the parſon in his pulpit. I was told of this ſtrange tenure; but do not vouch for the truth of it."

A conſiderable part of chapter 3d is taken up with a deſcription of Major Cartwright's method of making *ſtucco*. The Major and the Secretary were formerly intimate friends in the political line; and it does not appear that the deviation of the latter from his old creed has, in any ſhape, leſſened their intimacy. The Major makes a conſpicuous figure in this publication.

Speaking of the expence of farm-buildings, it is ſaid, page 33, that "500*l. will raiſe all the buildings, houſe included, for an arable farm of* 400 *acres.*" We ſhould rather apprehend, that this ſum would do little more than build the dwelling-houſe itſelf, when wood and labour is ſo much advanced. Suitable buildings for a tenant, poſſeſſing 400 acres of arable land, cannot be executed for double the ſum here ſpecified.—But our author takes every thing upon truſt; and is of ſuch a verſatile diſpoſition, that, at the diſtance of two pages, he ſtates, that 29 cottages, built by Major Cartwright, coſt 2538l. 15s. 2d.; which is ſomething like the preſent expence of building.

We hardly know what to make of the firſt ſection of chapter 4.; for the ſize of farms is, in one paragraph, deſcribed by the number of acres, and, in others, by the extent of the rent. Stating the ſize of detached farms, proves nothing. It

might at once have been ſaid, that the general ſize was by far too ſmall. Witneſs Sir Joſeph Banks' eſtate at Reeveſby, where ſixty-two farmers pay 1397l. for 3401 acres, being, upon an average, about 22l. 10s. per man for 55 acres of ground: Again, at Horn-Caſtle, 497 acres are poſſeſſed by fifty-two tenants; and, at Marum, twenty-nine tenants pay 276l. for 481 acres, or 18 acres per man. Several farms appear to be of conſiderable extent; and, before ſuch hazardous lands as compoſe the lower part of the county can be materially improved, the ſize of poſſeſſions muſt be greatly increaſed. The author ſeems to entertain ſimilar ſentiments, though he does not expreſsly ſay ſo. Hear what he ſays upon this point:

"As to the character of the farmers who have occupations ſufficiently large to be met with at the moſt reſpectable ordinaries, or whoſe exertions had occaſioned their being named to me as men proper to call upon, I can diſpatch my account of them in very few words:—I have not ſeen a ſet more liberal in any part of the kingdom. Induſtrious, active, enlightened, free from all fooliſh and expenſive ſhow, or pretence to emulate the gentry; they live comfortably and hoſpitably, as good farmers ought to live; and, in my opinion, are remarkably void of thoſe rooted prejudices which ſometimes are reaſonably objected to this race of men. I met with many who had mounted their nags, and quitted their homes, purpoſely to examine other parts of the kingdom; had done it with enlarged views, and to the benefit of their own cultivation. And the great energy, at preſent exerted in conſequence of the introduction of the new Leiceſter ſheep, by ſome to ſpread that breed, and by others to improve their old race, will not only have excellent effects, but has ſet them to think upon all other ſorts of ſtock. It has diffuſed an activity and a vigour, which will ſhew itſelf gradually in many other objects. The rapidity with which the culture of turnips has ſpread, and the manner in which they are cultivated; and the immenſe drainages, which, having opened new fields of wealth to landlords, have given opportunities to the tenantry, neither loſt nor neglected, are proofs alſo of the vigour with which theſe men have conducted their buſineſs.—But, without deſcending to particulars, and viewing only the general riſe of rent in the county, we may be convinced, that ſuch a ſpectacle could not have taken place, but with a tenantry ſuch as I have deſcribed."

The rent of land in this county does not appear racked; nor ought it to be ſo where farming is generally carried on under ſuch hazardous circumſtances. As Sir Joſeph Banks has

has the ſmalleſt farms, ſo he uniformly appears to receive the ſmalleſt rents. To ſave miſtakes, we ſhall quote the author's own words:

"In Holbeach, Sir Joſeph Banks has 1478 acres, rent 987l.; tithe 135l., and dikegrave's rates 49l. deducted; net rent 804l.; but greatly improveable. In Fleet, he has alſo 678 acres, rent 498l.; tithes 56l., and dikegrave 22l. deducted; net rent 419l. In Whaplode, 836l. acres, rent 500l.; tithe 50l., and dikegrave 27l. deducted; net rent 422l. In Moulton, 130 acres, rent 73l.; tithe 10l., and dikegrave 14l. deducted; net 58l.

A daſh of arithmetic is given, pages 46, 47, and 48, which diſplays the author's profoundneſs in practical agriculture. Without going into the eſtimates at large, which could ſerve no uſeful purpoſe, we remark, that five ſhillings is only allowed for ploughing an acre of ground, which is much below the actual expence. Twelve *per cent.* is alſo ſtated to be a ſufficient allowance to the tenant, upon his capital ſtock; whereas it will require fully that ſum to ſupport *tear and wear*, beſides the common intereſt which he would have received, if he had depoſited this capital with a banker, or veſted it in the funds, independent of every degree of remuneration for his perſonal trouble. We have uniformly diſſented from thoſe kinds of calculation, as they are, in moſt caſes, imaginary, and generally lead to very erroneous concluſions. Scarcely two farms in the kingdom are, acre for acre, managed at the like expence: ſo much depending upon the nature of the ſoil, the climate in which they are ſituated, the management practiſed, and the diſpoſition of the poſſeſſors.

It does not appear that the *tithe ſyſtem* bears hard upon this county, a great part of it being exonerated; but, like the poſſeſſors of land every where, the inhabitants wiſh to get free of the burthen altogether.

"I found, throughout the county, a very general deſire that ſome law ſhould paſs for the commutation of *tithe*. The farmers here, with their brethren in every other part of the kingdom, conſider this as one of the heavieſt of obſtacles to good huſbandry. There can be no queſtion of the fact; and it is not a fair argument, on the other hand, to recur to the vaſt riſe of rent, in conſequence of a ſuperior huſbandry which has taken place in this county. Encouraged by great capitals, and the general liberty and happineſs enjoyed by the nation, agriculture has made a vaſt progreſs; but this progreſs would have been much greater, had tithe been gene-

rally commuted. And it much deſerves attention, that, in this county, incloſing and draining, which have flouriſhed, perhaps, more than in any other, have eſtabliſhed an exemption from tithe over a very conſiderable portion of the whole; and that, conſequently, much of the proſperity, and riſe of rent, and improvements effected, may very fairly be attributed to this very circumſtance."

The juſtice of the above ſentiments will be acknowledged by every perſon who has attentively ſtudied the ſubject. Indeed, the moſt clamorous defenders of tithes, are thoſe who are either totally ignorant of the nature and operation of this deſtructive and pernicious tax, or intereſted in perpetuating a ſyſtem, fraught with the moſt injurious conſequences to the public welfare, and beneficial to none but thoſe who are concerned in the collection.

Leaſes are rarely granted in Lincolnſhire; and after this is mentioned, few people will expreſs ſurpriſe, when they are told, that improvements are ſo far behind. We entirely coincide with our author's ſentiments upon this article, which are certainly founded upon principles ſanctioned by reaſon and experience, and extract the following paragraph with pleaſure.

"Upon the ſubject of *leaſes*, as I wiſh to avoid all diſquiſitions which concern the kingdom at large, as much as the county of Lincoln in particular, it will be neceſſary only to remark, that, great as have been improvements in it, I have not the leaſt doubt they would have been much greater, and more rapid, had the cuſtom of granting leaſes been as common here as it is in Norfolk and Suffolk. I had particular converſations with ſome hundreds of farmers on this ſubject; and the univerſal opinion was, that, if leaſes were granted, they would occaſion exertions, which are not found at preſent. Upon ſoils ſo rich that there is nothing to do, the want of them cannot be material; but upon all others, where liming, marling, draining, fencing, &c are demanded, the want of a leaſe will often be the want of the improvement; and the *principle* will pervade the whole conduct of the buſineſs. Nothing will be ſo well done upon an uncertain tenure, as with ſecurity. Confidence in a landlord attaches to himſelf only, and not at all to his ſucceſſor: and the various inſtances that have occurred, of eſtates being conſiderably raiſed, muſt act as warnings to others. Granting leaſes would, in this reſpect of raiſing rents, eaſe a landlord greatly. When there is no leaſe, there is no more reaſon for raiſing at one period than another; and when it has been done in Lincolnſhire, it has uſually raiſed a great clamour. But if leaſes of twenty-one years were granted, the farmers would, in the firſt inſtance, very readily

pay

pay an advanced rent, as the price of the leaſe; and they might be given to underſtand, that, at the expiration, the rent would be raiſed again. Then a riſe would be looked for as a matter of courſe, and no clamour would attend it. Should any landlord be inclined to make this very valuable experiment, I would caution him upon one point; not to leaſe all the farms of an eſtate at one time; but give them ſo in ſucceſſion, that ſome might expire every year, when they begin to fall in; which might be eaſily done, by making it a work of five or ſix years, with a little variation in the duration of the leaſes. When a few farms in a great eſtate fall every year, and there is no general operation of *taſting* and valuing—there will be no outcry; the buſineſs will be regular, and the effect ſmooth and quiet. The landlord will have his fair ſhare in the progreſs of national proſperity, and his tenants will be ſecure and active."

Under the head of *expence* and *profit*, page 60, &c. we have an immenſe number of calculations, which, for the reaſons already aſſigned, ſhall be paſſed over in ſilence. It is an eaſy affair to make ſuch eſtimates prove any thing that is wanted. By augmenting the produce, and leſſening the expence, a favourite rotation may be ſupported. If the mountain will not come to Mahomet, there is no difficulty in carrying Mahomet to the mountain.

If any proof was neceſſary to ſhew the utility of a general diviſion of the common lands, the following tables, drawn up by an intelligent gentleman of the diſtrict, whom we are proud to call our friend, J. Parkinſon Eſq., are admirably calculated to forward ſuch a meaſure. Before land can be incloſed, drained, or, in any reſpect, materially improved, it muſt be held in ſeveralty. And it is truly aſtoniſhing, that the whim and caprice of individuals, ſhould have ſo long prevented ſuch an extenſive ſhare of territorial property from being rendered fertile and productive.

Recapitulation of the Tables.

	Old Rent.			*New Rent.*		
	L.	s.	D.	L.	s.	D.
Long Sutton	0	5	0	2	0	0
Lincoln Heath	0	1	0	0	10	0
Do. Lincoln, to beyond Kirkton	0	1	9	0	10	0
Near Norton	0	2	0	0	10	0
Gainſborough	0	8	0	1	7	0
Newton	0	3	6	1	2	6
Haxey, &c. commons	0	1	0	0	10	0
Carry over	L. 1	2	3	L. 6	9	6

	Old Rent.			*New Rent.*		
	L.	s.	d.	L.	s.	d.
Brought over -	L. 1	2	3	6	9	6
Barton - - - - - -	0	6	6	1	1	0
Wintringham - - - - -	0	7	6	1	13	0
Horton - - - - - -	0	10	0	1	0	0
Winterton - - - - -	0	10	0	1	0	0
Killingholm - - - - -	0	4	6	0	12	6
Dalby, Driby, Langton, Tetford, Swayby, Belleau, Hay, Greetham, Aſhby, Toynton, Keals, Fulletſby -	0	5	0	0	15	0
Mr Parkinſon's table - - -	0	4	8	0	1,	8
Claypool, Beckington, Doddington, -	0	8	0	0	19	0
Woolſthorpe, &c. - - -	0	6	0	0	18	0
Several near Grimſthorpe - -	0	6	0	0	12	0
	L. 4	10	5	L. 15	15	8

The *rotation of crops*, practiſed in Lincolnſhire, is more variable than in any other part of Britain, no leſs than 21 pages being taken up in deſcribing them. We do not think that Mr Young propoſes much improvement upon the clay land courſes. Why beans after clover? Would it not be better to ſubſtitute oats, to be ſucceeded by beans? Leguminous and culmiferous crops alternately, may juſtly be conſidered as the moſt beneficial huſbandry.

We were ſurpriſed to find potatoes claſſed among the crops not commonly cultivated, and yet they appear to be raiſed in conſiderable quantities. If we can depend upon the ſtatements with which we are preſented, this root yields an extraordinary produce. In one inſtance, the produce is ſtated to be 480 buſhels per acre, at 80 lib. per buſhel, which is 38,400 lib. or 92 Scots bolls per Engliſh ſtatute acre, allowing 26 lib. to the peck. We do not think our author well informed with the potato huſbandry, for he ſpeaks of planting 30 buſhels per acre; whereas 12 buſhels are fully ſufficient for that quantity of ground. We believe that, in many reſpects, he has been impoſed upon by fallacious accounts of crops and management, which his practice might have enabled him to detect.

In page 207, we obſerve an excellent opinion, given by Major Cartwright, relative to the mode of laying down graſs land.

"Hay ſeeds," ſays Mr Cartwright, "ſo called, abound in general with ſeeds of various plants, unfit for either paſture or meadow,

dow, with troubleſome and pernicious weeds, and even with graſſes deſerving no better appellation. Hence, it ſeems beſt, wholly to abandon the uſe of *hay ſeeds*, and to lay down land with nothing but ſuch graſs as can be obtained ſeparately and pure; truſting to nature for a ſupply of ſuch other graſſes as the ſoil may peculiarly affect."

It gave us not a little ſurpriſe, to peruſe the fine flouriſh, in favour of the Britiſh Legiſlature, at the concluſion of the drainage ſection, which we would have contraſted with ſome of Mr Secretary's former writings, if it had not occurred that ſuch a contraſt might have an invidious appearance. In the great articles of draining and incloſing, no public encouragement has been given, unleſs the mere mechanical operation of paſſing bills, for ſanctioning theſe purpoſes, are to be viewed in that light. If a general act was paſſed, it is obvious that immenſe ſavings would ariſe to thoſe concerned in ſuch undertakings. What has hitherto been done, proceeded entirely from the ſpirit and enterpriſe of individuals.

Upon the article of *paring and burning*, Mr Young gives the reſult of his inquiries in a more regular manner than cuſtomary.

General Reſult.

"1. It appears from theſe facts, that, upon the various ſoils mentioned, this practice has ſucceeded to ſuch a degree, as to juſtify the warmeſt approbation of the huſbandry in the county of Lincoln.

2. That it has, in ſeveral caſes, been attended with a general good effect, even with an incorrect courſe of crops.

3. That no inſtance has occurred, in this examination, where land has been materially injured.

4. That, where it has been attended with an ill effect, it has evidently ariſen from injudicious management.

5. That by no other method can waſte lands be ſo ſpeedily, effectually, and profitably improved.

6. That the benefit reſults from the aſhes; as, if they are removed, the crops ſuffer greatly.

7. That the fire has not the effect of diſſipating, or deſtroying the fertility reſulting from previous manuring; as the crop, after the operation, is proportioned to ſuch previous fertility from manures.

Our ideas on this ſubject are ſimilar to the above. As a firſt operation, we conſider paring and burning to be the moſt expeditious and effectual mode of bringing coarſe rough ſward

ſward into a cultivateable ſtate. Great judgment, in the way of cropping, is, however, afterwards neceſſary, otherwiſe the original benefit may prove a future loſs.

We find 73 pages engroſſed with accounts of the *ſheep-huſbandry* (which, undoubtedly, deſerves the ſtricteſt inveſtigation); but the whole is in ſuch a deſultory form, being converſations at ordinaries, and copies from looſe notes, that a review of it would be a moſt tedious buſineſs. Mr Young, very prudently, refrains from giving a preciſe opinion on the much agitated queſtion, Whether the new Leiceſter, or old Lincoln breeds, are moſt advantageous to the grazier? Nor will it be an eaſy matter, for thoſe who read his work, to pronounce any judgment upon their merits. Take the following paſſage, as a ſample of the information copiouſly detailed. We do not think he diſplays much kindneſs to Mr Elmhurſt, by preſenting him in ſuch a dreſs.

"At the ordinary at Horncaſtle, I had pleaſure, and, what is better, inſtruction, in meeting many capital breeders: The converſation preſently fixed to the queſtion of ſheep; and, as opinions differed greatly, I ſhall note one or two prominent features. Mr Elmhurſt of Stainſby, the chairman, declared, that 'he knew no better rule for breeders to attend to, than to have, or get, ſuch a breed of ſheep, as have good and thrifty feeding carcaſes; high ſtanding enough for Smithfield; *properly* lengthy; and, above all, with good, wide, and well made loins: And alſo, never loſe ſight of, but ſtrictly attend to, *having* and *keeping* a good long-wooled ſkin upon the whole of their flocks; and not to leſſen the weight and well grown quality of the wool, by running into newfangled fancies, and be *perſuaded* thereto, by all the rhetoric and well-placed ſpeeches of all the upſtart newfangled diſciples of *any* man."

The account of Sir John Sheffield's *cottage-ſyſtem*, p. 412, is uncommon.

"Upon Sir John Sheffield's eſtate, of twenty ſquare miles of country, the rents of the cottagers have never been raiſed; and, to prevent all oppreſſion, they have been taken out of the hands of the farmers, and made tenants to the landlord. They pay little or nothing, or rather leſs than nothing, for the cottage; as the land is worth more than they pay for both. For a comfortable habitation; a garden for potatoes, of a rood or half an acre, called a *garth*; with ſummering and wintering of two cows, which enables them to keep two or three very fine pigs (but never any poultry), they pay 40s. This great indulgence has no ill effect; they are very clean in every thing; remarkably well clothed; no children in rags; their beds and furniture good; are very ſober, and attentive to church; but not equally ſo, in educating their children to be induſtrious."

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Such an arrangement we cannot conſider as meritorious, or deſerving of imitation. Why ſeparate the cottager from the farmer, by whom, of courſe, he is chiefly employed? No uſeful object can be gained by ſuch a ſeparation; for, if Sir John Sheffield thought it neceſſary to bribe people to reſide upon his eſtate, he might do it as effectually, without breaking the cuſtomary connexion. The fact is, that a *bonus*, bounty, or call it what you pleaſe, of ten guineas *per annum*, is given to every family, of the deſcription called cottagers, who will reſide upon the eſtate, for a houſe, a garden, and a garth, of a rood or half an acre, with Winter and Summer food for two cows, is well worth twelve guineas in Lincolnſhire; whereas, according to our author, they only pay 40s. for theſe advantages. We are really at a loſs to aſcertain the good that can follow ſuch meaſures, unleſs the people in queſtion are paupers. According to what drops from the author in the ſucceeding page, the benefit lies all upon one ſide of the houſe. Take his own words: 'The women are very lazy: I have noted their indolence in ſpinning. Mr Goulton's expreſſion was, they do nothing but bring children, and eat cake: nay, the men milk their cows for them. But the men are very ſober and induſtrious.'

The ſixteenth chapter (*obſtacles to improvement*) is the ſhorteſt in the book, containing only twenty-two lines. The rural economy of Lincolnſhire muſt certainly be well arranged, or the obſtacles to improvement would have received a more comprehenſive diſcuſſion!

We have now waded through this voluminous, but deſultory report, which, with truth, may be conſidered rather as a groundwork for a future publication, than as a general view of the agriculture of Lincolnſhire. The plan laid down by the Board is in general followed out, that is to ſay, the chapters and ſections are marked according to the directions ſent to the ſurveyors; yet the moſt ſuperficial examination will ſhew, that our author, like many great preachers, cannot be tied down to his text. The taſk of peruſal is tireſome in the extreme; for the mind is bewildered by the huge ſtore of information communicated, while little relief is afforded, by judicious remarks, or well-founded concluſions.

The conduct of the author, in omitting to notice the original ſurvey of this county, and the marginal obſervations made upon it, betrays a want of candour hardly reconcileable with a liberal character; for the firſt outlines of the rural economy of this county, was executed in a manner equal to the moſt, and ſuperior to the generality, of theſe original ſketches.

A Review of the Agricultural Survey of Lincolnſhire, together with an Addreſs to the Board of Agriculture; a Letter to its Secretary, and Remarks on the recent Publication of John Lord Somerville; and on the ſubject of Incloſures. By THOMAS STONE: 421 *pages* 8*vo*. *London*, Cawthorn; *Edinburgh*, Hill, 1800.

A SEVERE drubbing is here given to our old friend Mr Secretary Young, though the rod is applied with more zeal than judgement. We believe Mr Stone is an excellent landſurveyor, and that he poſſeſſes a greater ſtore of practical knowledge than his antagoniſt: But his talents for reviewing ſeem to be of an inferior caſt; and the ſpecimen afforded in this publication will not add to his celebrity.

Mr Stone, as noticed in the preceding page, was employed, in 1793, to ſurvey the county of Lincoln, and likewiſe drew up reports for the counties of Bedford and Huntingdon. Theſe reports were far from being amiſs, conſidering them as rude outlines, or haſty ſketches of a ſubject, which, at the time, was imperfectly comprehended, even by thoſe who employed him. While he remained in full expectation of being appointed to prepare a more correct account of thoſe diſtricts, and was diligently collecting additional information, Mr Young was diſpatched down to Lincolnſhire to make a new ſurvey, 'in which honour would be done to no authority but that of Mr Young himſelf.'

It is not our intention to enter upon the merits of this conteſt, but to confine ourſelves to a few remarks upon the work now under conſideration. The addreſs to the Board contains a number of ſevere obſervations, which likely will not be much reliſhed by that reſpectable Body. Be this as it may, the ſentiments entertained by Mr Stone, are much the ſame with thoſe formed by the moſt reſpectable agriculturiſts, concerning the nature and deſign of the inſtitution.

The letter to the Secretary is written with much aſperity, and takes his conduct to pieces in the moſt cutting manner. The following is a notable ſpecimen:

"If we turn our obſervations to Bradfield-Hall farm, in Suffolk, the *ſeat of your improvements*, the moſt uſeful leſſon of practical huſbandry may be inſtantly learnt, by adopting the contrary of your example. Were the practical huſbandmen of Suffolk, within the

the circle of your fame, queſtioned by an inquiſitive traveller, reſpecting who was the worſt farmer in the county, they would immediately anſwer, Arthur Young."

We have ſeldom thought Mr Young gifted with the greateſt ſtock of *real* practical knowledge; but he was certainly among the firſt who turned the public mind to agricultural inquiries. Some of his early writings are fraught with judicious obſervations upon the leading principles of agriculture, and the cauſes which retarded its improvement; though, ſince the period of his exaltation at the Board, a ſtriking alteration of his ſentiments has appeared. The weak ſide of all his publications, is occaſioned by an enthuſiaſtic deſire to gather *facts*, which he offers to the Public in a crude and undigeſted ſtate: Whether he is capable of ſelecting the *grain* from the *chaff*, we ſhall not ſtop to inquire. Perhaps, the eſtabliſhment of the Agricultural Board has been to him a great misfortune. At that period, he was eſteemed one of the firſt-rate writers upon rural ſcience, and his authority looked upon with reſpect. Placed in his official ſituation, like a city upon a hill, his merits and defects are now obſerved with more facility.

The Review, as it is called, occupies 326 pages; but we are much at a loſs, to aſcertain what portion of it deſerves that title. Inſtead of animadverting upon the leading parts, or cloſely examining every page, Mr Stone interlards his own obſervations upon the county, and extracts from his former publications, with the criticiſms offered upon Mr Young's ſurvey. To eke out the book, or, probably, with the intention of illuſtrating his obſervations, 125 pages, marked with inverted commas, ſelected either from the author's former works, or from thoſe of other people, are included in the Review, which gives it a moſt heterogeneous aſpect. Notwithſtanding this deſultory mode of arrangement, we diſcover a number of juſt ſentiments upon various branches of rural economy: But Mr Stone ſhould have remembered, he was reviewing Mr Young's book, not writing a treatiſe upon another ſubject.

Lord Somerville, the late Preſident, comes in for a ſhare of the general thraſhing; and his ſeveral plans for improvement, when at the head of the Board, are treated with much freedom. Upon theſe matters, we do not preſume to offer an opinion, though we cordially coincide with Mr Stone, in thinking that Sir John Sinclair's plan of operations "certainly approached, as near as circumſtances would permit, to

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the only rational plan on which the operations of a National Board of Agriculture could be conducted." N.

A Temperate Diſcuſſion of the Cauſes which have led to the preſent High Price of Bread: Addreſſed to the Plain Senſe of the Public. *London*, Wright. 43 *Pages* 8*vo.* *Price* 1*s.*

THE contents of this well-written and judicious pamphlet, are in ſtrict uniſon with the title-page; for we have ſeldom peruſed a work of this nature, wherein a greater portion of moderation and candour was diſcernible. The author accurately traces out the cauſes of the preſent ſcarcity, which he juſtly thinks is not attributable to the effect of monopoly, or to the ſpeculations of corn-dealers, nor occaſioned by the war. He candidly, however, allows the influence of theſe things, but conſiders it as neither great nor preponderating.

That uſeful and neceſſary claſs of dealers, generally ſtyled "middle-men," having of late been expoſed to much obloquy, have met with an able defender.

"If the farmer were obliged to ſell all the corn he brought to market, to the conſumer, and the conſumer could only purchaſe of the farmer; what would be the conſequence? In an overſtocked market, the farmer muſt be ruined; and, in an ill-ſupplied market, the conſumer muſt ſtarve. Hence ariſes the neceſſity of the employment of the capital of the *middle-man*, who, by affording the farmer a certain ſale, enables him to ſell cheaper, and who, becauſe he purchaſes more than he conſumes, has the means of furniſhing the market with whatever the demand requires. No large city could be adequately ſupplied without the intervention of theſe men, who have lately been repreſented as interfering without neceſſity, and have been treated by a miſguided mob, as objects of public odium and deteſtation.

"It is true, that when an article becomes ſcarce, particularly one of conſtant demand, the price of ſuch article is not only raiſed by the ſcarcity, but is generally increaſed alſo, in ſome degree, by the ſpeculation which is founded upon ſuch ſcarcity. Farmers, and other dealers in corn, have been ſaid to have kept that article in ſtore, lately, more than in ordinary times, and ſo to have held up the price. But, are we ſure this is an evil? Is not, in the time of ſcarcity, the intereſt of the dealer in corn, and that of the public, in a great degree the ſame? If he brought his corn to market, as in a plentiful year, the whole corn of the country would be conſumed in the firſt four months. A ſcanty crop ſhould be ſpread ſparingly over every part of the year; and it is the high price that ſave

aves it to the end. As to the idea of a combination of farmers to oard their corn, it is chimerical: They do not communicate enough with each other, to combine; and, if they did communicate, their numbers, and their different circumſtances, would preclude the poſſibility of ſuch a practice. They were never ſuppoſed to have hoarded more upon ſpeculation, than in the laſt twelve months; and yet the old ſtock of corn was never ſo nearly exhauſted on the appearance of the new crop, as in the preſent ſeaſon."

Though thoſe who are inimical to the war, take up wide ground, when they aſſume it as the principal cauſe of the preſent high prices; yet our author is equally wrong, when he indirectly attempts to prove, that it has no effect at all. War muſt neceſſarily have an influence upon markets, eſpecially in deficient years; for no government can poſſibly maintain a large body of men, at ſo ſmall an expence, and with ſo little waſte, as thoſe men could, and would, ſupport themſelves. Beſides, the ſoldiers and ſailors employed, are unproductive branches of the community; and the ſtations formerly occupied by them, muſt one way or other be filled up by others, which increaſes the demand at market; or, if not filled up, the productive powers of the earth muſt partially remain dormant, from a want of ſuitable cultivation. Again, war prevents a free importation from other countries, or cauſes grain to be purchaſed at higher prices, or procured with greater difficulty.—So far, war operates to raiſe the value of proviſions, and no farther.

This reſpectable writer appears alſo to fall into another error, when he ſuppoſes that taxes have no effect in raiſing prices. If the farmer does not ſell at higher prices than formerly, how is he to pay his income tax, and other numerous increaſed expences, occaſioned by the operation of taxes upon others? That the triple aſſeſſment of 1798 did not raiſe prices that year, proves nothing; for the tax remained generally unpaid, till the end of that, or the beginning of the next year. At any rate, ſome time muſt elapſe, before its influence was diſcernible.

Though we differ a little with the author in this ſingle point, viz. the *effect* of war and taxes upon the markets; yet we cordially concur with him, that war is not the *cauſe* of the ſcarcity. With ſuch crops as have been reaped for two ſucceeding years, a ſcarcity would have unavoidably followed, under the moſt peaceable æra, though, perhaps, in a leſſer degree. The ſcarcity, or rather famine, at the concluſion of laſt century, happened immediately after the peace

of

of Ryſwick; whereas, in the ten preceding years, when a convulſion prevailed in the political ſtate of Europe, ſmiling plenty, though not with peace, circulated over theſe lands.

N.

PART III.

AGRICULTURAL INTELLIGENCE.

PREVIOUS to detailing the intelligence communicated to us, reſpecting crops, labour, or markets, we obſerve, with feelings of deep commiſeration, that the preſent diſtreſſes of the country furniſh a melancholy proof of the truth of the ſtatement given in the laſt Number; a ſtatement that did not proceed upon conjecture, but upon the beſt and moſt correct information. Our pleaſure would have been great, had the reſult been of a different nature.

Amidſt ſo much diſtreſs, it is highly conſoling to obſerve the ſteps that have been taken by Government, not only to increaſe the ſupply of grain and proviſions, by every poſſible means, but to ſet an example of economy, highly commendable at all times, but, in the preſent ſtate of the country, indiſpenſably neceſſary. The proceedings of both Houſes of Parliament have removed the film from the eyes of many, in regard to the real ſtate of the country; and a part, at leaſt, of thoſe who were loud in their complaints againſt farmers and others who deal in agricultural produce, now entertain ſentiments diametrically oppoſite to what they formerly held, and which had been inſtilled into them by the falſe ſtatements preſented in the newſpapers. Great, however, as this change in the public mind is, there are ſtill a ſet of perſons in the country, who are proof againſt conviction of every kind, and who, like the adder, ſhut their ears to every ſound, but the croakings of diſcontent. We have a notable inſtance of ſuch perverſeneſs, in an advertiſement from a ſociety at Dumfries, inſerted in ſome of the public papers, ſetting forth the miſeries of the poor, and expreſſing themſelves in terms of execration againſt the authors of the preſent calamity. Were the people who dictated the advertiſement worth reaſoning with, they might be aſked with great propriety, Who were the authors of their diſtreſs? Men of the beſt ſenſe, who

who are in the habit of viewing things through a juſt medium, and tracing effects to their proper cauſes, aſcribe the ſcarcity to a ſeries of bad ſeaſons. If their opinion is correct, the deteſtation and abhorrence, ſo ſtrongly expreſſed in this advertiſement, either means nothing, or is ſhockingly impious. Without commenting farther upon the language of that advertiſement, and others of a ſimilar tendency, we have ſimply to obſerve, that it furniſhes a ſtrong proof of the mildneſs of our Government, that either the authors or publiſhers of productions ſo inimical to the public tranquillity, ſhould eſcape with impunity.

That a real ſcarcity prevails in this country, is not in the leaſt degree problematical; for, if the high prices of grain, and the immenſe quantities imported from foreign parts, were inſufficient to prove the fact, it is now aſcertained, in the moſt preciſe manner, by the Reports preſented to the two Houſes of Parliament, by their reſpective Committees. Perhaps, theſe reports are not underſtood as they ought to be. Upon corn farms, near two fifths of the produce in ordinary years, is conſumed or uſed at home, for ſeed, feeding horſes, ſervants wages, and family purpoſes: that quantity is indiſpenſably neceſſary in the beſt of years, and muſt be had in the very worſt: hence, the deficiency is entirely upon the quantity that remains to be marketed; which, under circumſtances ſimilar to the laſt and the preſent years, will not much exceed one half of the uſual ſupply. Few perſons, but thoſe intimately acquainted with agricultural concerns, are aware, that a crop, *one fourth ſhort* of an average, affords little more than *one half* of the grain to be carried to market, as could be furniſhed in favourable years.

The meaſures ſuggeſted by Adminiſtration, and adopted by Parliament, are not only conſolatory, but highly praiſeworthy. Inſtead of reſorting to the novel expedients propoſed by ſpeculative men, for regulating the market, they have judiciouſly given every degree of encouragement to the importation of grain from foreign countries; which is the only way by which the quantity in the market can be increaſed; and they have recommended the ſtricteſt economy to all ranks, which will neceſſarily leſſen the conſumption in a conſiderable degree. Subſtitutes for grain have alſo been induſtriouſly provided; and, with great wiſdom, the market has been left to find its own level. By ſuch meaſures, it is true, the evil cannot be altogether removed; but it is equally true, that the preſſure will be removed from thouſands, who

would otherwiſe have ſunk under its burden. The principal alleviation of the preſent diſtreſs will be found in a rigid economy of our reſources, in a retrenchment of every ſuperfluity on the part of the opulent, and in the uſe of ſuch ſubſtitutes for grain as can be procured.

It is evident, that a certain claſs of people, under every practicable retrenchment, are ſtill unable to encounter the preſſure of the times. Theſe are the working or induſtrious poor, whoſe wages, it muſt be confeſſed, bear no affinity to the common prices of the neceſſaries of life; hence, their caſe, under every conſideration, deſerves the attention of thoſe upon whom the law has devolved the care of ſuch matters. This numerous claſs of the community are perfectly diſtinct from thoſe ſtyled the *ordinary poor*, who are looked after and ſupported by the heritors and kirk-ſeſſion of the pariſh in which they reſide. Many country pariſhes have aſſeſſed themſelves in conſiderable ſums, for the ſupport of the working people; but, as doubts are entertained by ſeveral people, whether theſe aſſeſſments, under the exiſting laws, could be enforced, we think it would have been wiſe and ſalutary in the Legiſlature to have paſſed a temporary law, ſomething ſimilar to the one enacted laſt Seſſion of Parliament for the city of Edinburgh. Under exiſting circumſtances, the welfare of ſuch a numerous and valuable part of the community ought not to depend upon the voluntary benevolence of their ſuperiors; it being obvious, that, if this were the caſe, their ſituation, in many inſtances, would be totally neglected. To render any meaſure generally uſeful, it muſt be made obligatory upon all; therefore, a new poor's law, at this time, was abſolutely neceſſary. The reſolutions of one pariſh upon this ſubject, are given in this Number; and we are free to ſay, that the plan therein adopted, is not only creditable to thoſe concerned, but admirably calculated for relieving the induſtrious poor in an effectual manner.

The weather, ſince the latter part of Autumn, has been more than commonly favourable for the ſeveral operations of agriculture, and has allowed tillage, of the moſt perfect kind, to be extenſively executed. The wheat lands were got ſown in excellent condition; and the young plants have a promiſing appearance. A full quantity was univerſally ſown; but, if the Spring is favourable, a good deal of land, in the early diſtricts, preſently occupied with turnips, will alſo be ſown with this grain.

The

The corn markets have ſteadily advanced during the greateſt part of this quarter; but, within theſe two weeks paſt, in the article of wheat, they have declined in ſeveral parts. Perhaps this declenſion may be attributed to a ſmaller demand, as the general uſe of ſubſtitutes muſt leſſen the quantity of grain conſumed. The large importation lately made from foreign countries, has alſo occaſioned a temporary glut; but, unleſs ſuch are regularly continued, we cannot expect any conſiderable reduction of prices. Barley has hitherto been the moſt plentiful grain; but, owing to mixing it among wheat, and the giving it to horſes, a great extenſion of the demand, and advance upon the prices, has lately taken place. Oats have not fluctated much in price of late; but it is to be feared, that, unleſs large ſupplies are received from abroad, this article will be afterwards exceedingly ſcarce, as the want of fodder will occaſion them to be early thraſhed out. Peas and beans are rapidly riſing in ſeveral diſtricts; and a ſure proof of their ſcarcity, ariſes from the ſmallneſs of the quantity hitherto preſented at market. A want of horſe fodder has cauſed the moſt of farmers to delay thraſhing black victual till the Spring months, when it may be expected theſe grains will become more plentiful.

Potatoes are deficient to a greater degree than laſt year, and a conſiderable proportion of this crop is of a very inferior quality, owing to their having been ſtinted by the drought during Summer, and having vegetated anew after the Autumn rains. In ſome of the northern diſtricts, the crop is already nearly conſumed, and, in every place, they are ſcarce.—Apprehenſions are entertained that this uſeful root will not keep through the Winter, from the quality being originally ſo much impaired.

Hay and ſtraw over North Britain, are high beyond all precedent, notwithſtanding the openneſs of the Winter admitted beaſts of all deſcriptions being kept upon the paſtures longer than is cuſtomary.

The markets for fat cattle and ſheep have, during the quarter, been well ſupplied, and prices have, for ſome time paſt, been upon the decline; but they are now rather higher. Owing to the general ſcarcity of fodder, and other circumſtances, a great number of half-fed beaſts have been thrown into the market, which would otherwiſe have been at the feeding ſtake. This temporary glut will probably be ſeverely felt in the Spring months, unleſs the graſs ſeaſon is very early. Lean ſtock, for two months paſt, have been a drug;

and the quantity wintered in the ſtraw-yards is hardly equal to the half of what were commonly kept.

Upon the whole, our proſpect, at the commencement of this volume, is much more pleaſant and agreeable than what we experienced laſt year, when we entered upon our work. That the auſpicious circumſtances, under which the labour of the year has hitherto been executed, may continue to prevail during every ſubſequent operation, till at laſt the year is crowned with a plentiful crop, is our earneſt wiſh, and, we truſt, the wiſh of every perſon who has the intereſt of agriculture, and the welfare of the public, at heart.

EXTRACTS FROM ORIGINAL CORRESPONDENCE.

SCOTLAND.

Angus, Mearns, and Aberdeen Quarterly Report.

TAKING theſe three counties in a maſs, they exhibited a ſtrange variety of very good, and deſpicably bad crops; and the effects of ſuperior huſbandry was never ſo diſtinguiſhable, as during the laſt ſeaſon. Along the coaſt, we have a conſiderable tract of fine deep land; originally of a clay baſis, upon which the crop in general was equal to an average one, where good management had been practiſed. On the ſtrong clays and thin lands, the different crops have turned out miſerably poor.

The bear may be reckoned at two thirds of an average crop. The oats in Angus and Mearns, at one half of an average, and in Aberdeenſhire, at two thirds; but theſe proportions muſt be greatly reduced, when viewed as a year's ſupply. They were, in many caſes, cut before ripe; and, inſtead of the conſumption beginning betwixt Martinmas and Chriſtmas, as cuſtomary, moſt people began to thraſh and meal before the latter end of Auguſt. I apprehend we have a ſmaller ſupply of grain in theſe three counties, than was on hand at the ſame period laſt year.

An inſect prevailed, to a great extent, upon the crops, which certainly hurt them much, and, in ſome parts, rendered the fields affected entirely black or diſcoloured. When the ſtalk on which they lodged, was viewed with a microſcope, it ſeemed rough and indented; they having evidently drawn their ſupport from the juice which ſhould have nouriſhed the grain. I find, as far as I can depend upon the attention of my informers, and it is ſo from my own obſervation, that where the inſect moſt prevailed, the oats have turned

turned out very unproductive in meal; and the pooreſt crops, even in bolls, are thoſe where the inſects are moſt numerous.

Towards the beginning of Harveſt, prices ſunk much; but the advance ſince has been very rapid. Wheat ſtarted at 48s. and 50s. per boll, and has now got up to 63s., Angus meaſure, of 90 pints. Bear and barley, from 36s. to 42s. per boll of 128 pints. In Aberdeenſhire, the meaſure is larger; but ſo is the price.

Bear meal was at one time as low as 1s. per peck, but has now got up to 1s. 6d. and 1s. 10d., and can hardly be got at theſe prices. Unmixed oat meal can with difficulty be procured at market; and thoſe who have it, get what they pleaſe to aſk—it may be ſtated at 2s. 6d. and 2s. 8d. per peck. Potatoes at 1s. 6d. per peck of 32 libs.—at Aberdeen 2s. Hay 1s. 6d. per ſtone; and ſtraw about 10s. per boll of grain.

Beef is very reaſonable, and, at preſent, we have a very full ſupply. Fat cattle are about 6s. or 6s. 3d. per ſtone, ſinking the offal. A great deal of tolerable beef has been ſold at 5s. per ſtone.—Lean cattle unſaleable.

At preſent, every thing wears the appearance of better times next ſeaſon. Our wheat lands were ſown in excellent condition, and the braird looks well—the extent much as uſual. All our other farm labour is well advanced, and a proſpect afforded of a rapid diſpatch in Spring work, if the weather is any way favourable.

Had not the weather, ſince the Harveſt, proved open and mild, it is hard to ſay what would have become of our lean ſtock. Even as it is, many people will have difficulty in bringing them through alive. Turnips turn out well; and, owing to the temperature of the ſeaſon, fattening cattle come forward uncommonly faſt.

Dec. 25th.

Berwickſhire Quarterly Report.

From a combination of circumſtances, the quantity of ground under Summer-fallow this year, exceeded the ordinary proportion; and, as the ſeaſon for ſowing wheat proved extremely favourable, that grain has in conſequence been ſown to a greater extent than uſual, and the fields every where exhibit a thick braird of healthy plants.

Turnip, which was formerly mentioned as being a fine crop, continued to improve, even during this quarter. From 7l. to 8l. an acre, Engliſh meaſure, has been given for thoſe of the beſt quality. Young graſſes have alſo improved much.

Ploughing is in a very forwardly ſtate, the weather having been uncommonly favourable for agricultural operations. Some farmers

have already begun ploughing up lea ground, for want of other employment.

The market for lean cattle, which, at the commencement of this quarter, was rather upon the advance, declined rapidly towards Martinmas, from a general apprehenſion of the ſcarcity of fodder, and a dread of an early Winter, which a fall of ſnow at that time ſeemed to indicate. The mild weather we have ſince experienced, has contributed much to the ſaving of fodder, in ſituations where cattle could with propriety be allowed a range on the paſtures.

Butcher markets have remained almoſt ſtationary during the whole quarter: beef and mutton are from 5d. to 6d. per lib.; but the price of fat ſtock has recently experienced a conſiderable advance, in conſequence of a briſk demand for the ſupply of Morpeth market.

Hay has already been ſelling as high as 2s. per ſtone of 22½ lib. Engliſh; but the moſt common price is 1s. 9d. Potatoes, per boll of 40 ſtone Engliſh, at 24s.; Salted Butter from the dairy, at 60s. per firkin; Eggs at 1s. 5d. per dozen; and Oat Meal at 5s. 6d. per Dutch ſtone. Corn markets have kept conſtantly advancing. At Berwick, December 27th, good grain ſold as follows, viz.

Wheat from 95s. to 100s.	Oats from 36s. to 44s.
Barley from 45s. to 50s.	Peas from 65s. to 70s.—all per
December 29th.	boll of ſix Wincheſter buſhels.

Argyleſhire Quarterly Report.

The Harveſt in this county was got in without any material damage. The grain, in general, is hearty, though the barn, and ſtack-yard, are not ſo full as uſual. This deficiency in the ſtraw, is a circumſtance that has turned out much to the advantage of the poor and the public, in ſuch a ſeaſon as the preſent; for the farmer, afraid of a ſcarcity of provender for his cattle, delayed as long as poſſible to thraſh out any more than was abſolutely neceſſary; by which the ſtock of proviſions is much better ſaved, than if the beſt houſewives had got it ſooner under their own management. Perhaps, the expectation of a higher price has alſo contributed, hitherto, towards keeping more from coming to market, than uſed in ordinary years. Nor is it reaſonable to blame the farmer for attending to his own intereſt, as well as the merchant, who wiſhes to bring his goods to the beſt market he can find.

Whatever be the reaſon, a boll of meal was not ſo difficult to be got in this county during laſt Summer, nor for fifty years paſt, as it has been ſince the concluſion of laſt Harveſt. It is

all

all well: for we have the better ſecurity of proviſion for the time to come; as, he who ſaves his ſupper at night, will find it in the morning. In the mean time, all, rich and poor, have the greateſt abundance of the *root of plenty*, potatoes. In no year has there been a greater quantity of them in this county than in the laſt, as the ground, in general, is not of a nature to bind, or be hurt by drought; and the hills and mountains, with their numerous ſprings, continued to ſupply the valleys with moiſture, when many other parts of the kingdom were entirely parched. Hence, our crops in this county, in general, are very little, if any worſe than uſual: So that, with economy, we may be able to make the two ends of the year meet.

In a time of ſcarcity, there is no rule comparable to *economy*. This county was in uſe of importing, yearly, from 25,000 to 30,000 bolls of meal: all this was ſaved laſt year by economy: for if a ſmall trifle was imported, the export was at leaſt equal to it. The only danger we have to apprehend, at preſent, is, the want of virtue to reſiſt the temptation to private diſtilling. It is time thoſe who are able to pay fines, may be made to feel that it is not only a nefarious, but a *loſing* buſineſs, when detected. But the rich are often in colluſion with the poor, who have nothing to loſe; ſince the law does not inflict, as in ſuch caſes perhaps it ought, corporal puniſhment. It is certainly a greater crime, at preſent, than ſtealing a ſheep or a cow; if we eſtimate crimes by their conſequence to ſociety.

About the beginning of October, the ſale of cattle in this county was dull; but, towards the end of it, all ſold at very good prices; inſomuch, that ſome, who were ſlack in providing their Winter beef (the general practice in this county), found ſome difficulty at laſt in finding it.

Excepting a few ſtormy days, the Winter with us has been hitherto remarkably mild, and extremely favourable, both to black cattle and ſheep, which are all in good order. The houſed cattle have alſo required ſo little, as yet, in compariſon to what they uſed to get, that the anxiety about a ſcarcity of provender is greatly abated, though not entirely over.

The herring fiſheries have not this year done ſo well as uſual. Many of the veſſels employed in it, after making little in the Highlands, have gone to try it on the Eaſt coaſt, where, it is hoped, they will be more ſucceſsful.

Any meal to be got, has ſeldom exceeded 2s. 6d. the peck, in any part of the county; in ſome places leſs. In Kintyre, it was agreed upon, in order to keep it in the country, that it ſhould be regulated by the average prices of Ayrſhire, Renfrewſhire, and Dumbartonſhire, deducing freight expences. Bear in the ſame manner. Potatoes, 1s. 3d. the peck of about 50 lib.; lately, only

ſhilling. Butcher meat, 3½d. to 4d. the lib. Engliſh. Butter 16d.; cheeſe 6d. the lib. Tron.

Even in the lower and more arable parts of this county, few think of yoking the plough, till after New-year's-day. In the upper parts, which are moſtly under the ſheep ſyſtem, tillage has been much neglected for ſome time, but will probably be in more repute ſoon, from knowing, this year and the laſt, the great value of good oaten meal.——29*th December* 1800.

Extract of a Letter from Haddington, December 30*th.*

"In the preſent diſtreſſed times, when the caſe of the lower ranks requires the commiſeration and aſſiſtance of the affluent, it gives us pleaſure to inform you, that a very general relief has been granted to the working people, in the different pariſhes of this county. A public kitchen has been eſtabliſhed in this place; and others, upon a ſmaller ſcale, are carried on by individuals, in their reſpective neighbourhoods. Annexed, you have the reſolutions of the pariſh of Preſton, relative to ſupplying the people in that diſtrict, which, I truſt, will be deemed worthy of inſertion in your Magazine."

At a Meeting of the Heritors and Tenants of the Pariſh of Preſton, Eaſt Lothian, held at Linton, upon the 8th day of December 1800; *in conſequence of a legal edictal citation from the pulpit, to take into conſideration the ſtate of the Induſtrious Poor, whereof George Buchan Hepburn Eſq. of Smeaton, was choſen Preſes, IT WAS RESOLVED,*

1*ſt*, That, under the preſent circumſtances, it is proper and neceſſary to ſupply the whole labourers and tradeſpeople of the pariſh, who are not paid in grain, or whoſe wages do not exceed two ſhillings per day, with meal at prices below market rates, according to the extent of their reſpective families, and the amount of their wages.

2*dly*, That the meal ſhall be purchaſed from dealers or millers, in quantities equal at leaſt to what is required for one day's ſale; and that no barley ſhall be mixed with the oats from which the oat-meal is manufactured.

3*dly*, That the ſale ſhall commence on Monday the 22d current, and be regularly carried on every fortnight afterwards, till further orders.

4*thly*, That the quantity of oat-meal to be ſold to each family, ſhall in no caſe exceed one half of the barley meal with which they are furniſhed; it being evident, that oats are a ſcarce article this

this ſeaſon, and ought to be uſed in the moſt economical manner.

5*thly*, That the induſtrious poor be ranked in three claſſes—1. Single women, widows, old perſons; thoſe who are unable, or cannot procure work; and labourers and tradeſmen, whoſe wages are at, or below 1s. 4d. per day:—2. Labourers, and tradeſmen of all deſcriptions, whoſe wages, whether earned by the day or by piecework, do not exceed 1s. 4d. per day:—3. Labourers and tradeſmen, whoſe wages exceed 1s. 6d., and are at or below 2s. per day, in whatever circumſtances ſuch are placed; but this claſs to be furniſhed only with barley meal.

6*thly*, That the price of meal to the firſt claſs ſhall, in every caſe, be 1s. 4d. per peck, for oat meal, and 1s. for barley meal; to the ſecond claſs, for oat meal 1s. 6d., and barley meal 1s. 3d.; and to the third claſs, barley meal only, at 1s. 4d. per peck.

7*thly*, That the quantity of meal to be ſold to each family for a fortnight's uſe, ſhall be,

	Oat Meal. Pecks.	*Barley Meal. Pecks.*
To a ſingle perſon - -	$\frac{3}{4}$	$1\frac{1}{2}$
To a man and his wife - -	1	2
To a man, wife, and 2 children	$1\frac{1}{2}$	3
To a man, wife, and 3 children	$1\frac{3}{4}$	$3\frac{1}{2}$
To a man, wife, and 4 children	2	4
To a man, wife, and 5 or more children - - -	$2\frac{1}{4}$	4

8*thly*, That a moderate quantity of both oat and barley meal, at the diſcretion of the Committee, ſhall be provided in ſtore, to be ſold at the market price to ſuch inhabitants of the pariſh, as are not included in the above claſſes, in caſe of neceſſity; that is, in the event of the ordinary dealers in meal not being able, at any particular period, to ſupply the demand of the pariſh.

9*thly*, That the whole heritors and tenants of the pariſh, together with the Reverend Mr M'Queen, Mr Andrew Taylor, and Mr Alexander Brown, ſhall be, and are appointed, a Committee, for carrying into execution the purpoſes of this meeting, any two of whom to be a quorum, who ſhall meet in the ſchoolmaſter's houſe, upon the day, and at the hour to which the Committee ſhall have formerly adjourned.

10*thly*, That a Sub-Committee, conſiſting of Mr George Rennie, Mr Robert Brown, Mr Archibald Knox, Mr Archibald Hepburn, and Mr Andrew Taylor, ſhall be, and are appointed for purchaſing the meal, who ſhall give draughts upon the collector for the payment of the ſame. Mr John Watt, one of the members of the kirk-ſeſſion, is appointed to receive the meal, and to take charge of the ſame; and he is particularly enjoined to receive none, but what

is

is of the beſt quality. Robert Hamilton and John Gibb, alſo members of the kirk-ſeſſion, are appointed diſtributors, and Mr William Dickenſon, collector and clerk of the ſales.

11*thly*, That it be an inſtruction to the general Committee, in the event of the enſuing Winter being hard and ſevere, to furniſh the moſt neceſſitous of the poor with coals free of any expence.

12*thly*, That, as the Parliament of Great Britain ſeem to think that the crop, upon the whole, is ſomewhat ſhort of an average one, and have ſuggeſted the propriety of introducing ſubſtitutes in place of bread corn, that it be an inſtruction to the Committee, to inquire at Greenock, and other ſea-ports, where Indian corn, or the meal thereof, or rice, are, or ſhall be imported, the price thereof per cwt. or otherwiſe as ſold; and to conſider, how far all, or any of theſe ſubſtitutes, can be introduced into the conſumption of bread corn, in this pariſh, either pure, or mixed in certain proportions with the native bread corn, with which the Meeting have reſolved to ſupply the poor.

13*thly*, That the general Committee are hereby inveſted with diſcretionary powers to reduce or increaſe the prices of meal, and the quantities to be furniſhed to each family, according to the ſtate of markets and other circumſtances.

14*thly*, That, in order to defray the loſs which ſhall be ſuſtained from carrying the foregoing reſolutions into effect, an aſſeſſment of 200l. Sterling ſhall be made upon the landed property of the pariſh, payable on or before the 20th current; and the pariſh is hereby, in terms of law, aſſeſſed accordingly.—Mr Dickenſon, the collector, is directed to make out a ſcheme of the diviſion of the ſaid aſſeſſment, and to tranſmit the ſame to all concerned.

15*thly*, That, in caſe further aid is neceſſary for accompliſhing the above purpoſes, the Committee ſhall requeſt the miniſter to call another legal parochial meeting, at leaſt one month before the preſent aſſeſſment is exhauſted, to whom they will preſent a ſtate of their intromiſſions.

16*thly*, That the firſt meeting of the Committee ſhall be held within the ſchoolmaſter's houſe at Linton, upon Monday the 15th curt., when tickets, ſigned by the Preſes, ſpecifying the quantity and price of the meal to be furniſhed each family, ſhall be delivered to thoſe who are to be ſupplied, and the diſtributors are directed to adhere ſtrictly to the ſame.

17*thly*, That theſe Reſolutions be inſerted in the Courant, Advertiſer, and Mercury, for the information of all concerned.

(Signed) GEO. BUCHAN HEPBUBN, P.

Extracted from the Minutes, by

WILLIAM DICKENSON, Clk.

Moray.

Murayſhire Quarterly Report.

This and the two preceding months have been extremely favourable for field work: an unuſual quantity of wheat has been got into the ground in fine condition, and ploughing in general was never known to be further forward; a circumſtance fortunate in many points of view; more eſpecially as, from the ſcarcity of fodder, the ſtraw of five firlots oats ſells for 35s. and 37s. Sterling, and hay continues at 2s. per ſtone.

The wheat crop, although conſiderably under an average one, turns out rather larger in quantity than was expected: the quality is fine, and it has juſt now ready ſale at 55s. to 58s. per boll.

Barley weighs 18 ſtone, and ſells at 40s. to 46s. per boll. This grain is little ſhort of an average crop, and in conſiderable demand, being much wanted as a ſubſtitute for oats, which are unuſually deficient in quantity and quality, requiring five to eight firlots for a boll of meal, and ſelling at 36s. to 40s. per boll, at five firlots.

Beef is 3½d. to 5d. per lib. and getting ſcarce; Mutton ſame price, tolerably plenty and good, owing to the open weather.

Upwards of four thouſand guineas was ſubſcribed, in October, by the Magiſtrates, Incorporated Trades, Guildry, different ſocieties, and ſome individuals in and about Elgin, for the purchaſe of grain and meal, to be retailed at the average price which meal of ſimilar quality ſhould ſell for at Inverneſs, Banff, and Aberdeen, from which places weekly market letters are received. A Committee were appointed to purchaſe and ſell, with powers to lower, but on no pretence to raiſe, the price beyond the currency of theſe towns. They were fortunate enough to make pretty favourable bargains, and are now retailing 12 lib. Amſterdam weight of good barley meal at 2s. 6d., and 9 lib. of oat meal at ſame price, which is under the average of the above towns; and, at ſame time, the ſubſcribers are kept free of any material loſs. The weekly conſumpt is 25 to 30 bolls, and there is about 1200 bolls now on hand. The Committee are daily adding to their ſtock of grain; and the Bank of Scotland has very handſomely aided their exertions, by lending 500l., free of intereſt, for twelve months.

A public kitchen is eſtabliſhed at Elgin, out of which the lower claſſes of people get good barley broth, ſix days in the week, at a penny per ten gills; the loſs is defrayed by eighty to a hundred guineas ſubſcriptions, and the managers expect to go on till next harveſt.

31ſt December 1800.

Roſs-

Roſs-ſhire Quarterly Report.

The crops here were, upon the whole, got ſafe into the ſtack-yard; but, as was foreſeen, they hulked very poorly. It was, however, hoped they would give well to their bulk; but this is found, by experience, not to be the caſe: They neither turn out the number of bolls expected, nor do the oats yield their uſual quantity of meal. In the eaſtern diſtrict, where the crops are beſt, the tenants will not be able to pay in kind half of their victual rents. In the Black Iſle, Ferndonald, and Strathpeffer, the barn-yards exhibit an appearance which, in ordinary years, would be thought poor in the month of March: Very few bolls will be paid to the laird in theſe diſtricts, and many landlords will receive little more grain from their tenants, than will pay the miniſter's ſtipend, &c. This county uſually exports conſiderable quantities of grain; but it is generally believed there will be none to ſpare this ſeaſon, and it is even doubtful if there will be a ſufficient ſupply for the inhabitants till next harveſt.

A gentleman, in the eaſtern diſtrict, informs the writer of this article, that in that quarter they would ſtill have grain ſufficient for ſeed, and the uſe of the inhabitants, provided diſtilling were altogether ſtopped; but this is not ſo eaſily done as might be imagined.

Potatoes were a ſhort crop, and, from being the principal ſupport of the lower claſſes ſince the firſt of Auguſt, are much exhauſted. From the high price and ſcarcity of meal, many families have lived ſolely upon them for months paſt, and numbers have already conſumed their whole ſtock. It is feared the bulk of the people will not be able to ſave ſeed for next crop, and there will be few or none for ſale.

There was a pretty briſk demand, in the month of November, for cattle, though at low prices, when a great number were driven to the ſouth; and there never was ſuch a ſlaughter in the county for home conſumpt. But though, by theſe means, the quantity of live ſtock has been conſiderably reduced, yet, the remainder will be much pinched for fodder; and, ſhould the Spring prove ſevere, it is feared numbers of cattle will die for want. The weather has been remarkably favourable for three months paſt; the wheat was all ſown in good order; and the ploughing was never farther advanced at this ſeaſon. Oat meal has been ſelling from 40s. to 50s. per boll of nine ſtones; wheat is nearly all diſpoſed of; it brought 50s. per boll. We have no fixed price for oats and peas. Barley ſells from 42s. to 46s. per boll. Beef and mutton have hitherto not been higher than 4s. per ſtone; but, from the

: ſcarcity of Winter feed, are expected to be high-priced in the ring. Raw hides, which formerly ſold at 4d. and 5d., have now len to 2d. and 3d. per lib. Dutch weight. Hay has been ſelling 1s. 6d. and 1s. 8d., but cannot be had now under 2s. per ſtone. here is a report, within theſe few days, that herrings have ap-ared in great plenty on our weſt coaſt, which, if true, will prove ſeaſonable relief to the poor.

Upon the whole, though the ſcarcity muſt be ſeverely felt, yet, uld a total ſtop be put to diſtillation, ſo as to ſave the grain on nd for food, it is to be hoped, that, with the ſupply of herrings ove mentioned, a real famine may be prevented in this county, ich otherwiſe is much to be dreaded.

December 29. 1800.

Extract of a Letter from Glaſgow, January 1.

• Though the quality of our grain is good this ſeaſon, yet, we : ſorry to ſay, that the quantity is turning out far ſhort of an erage crop. The fine mild weather ſince harveſt, has been high-favourable for preſerving the fodder, which is a ſcarce article our neighbourhood, and has admitted a greater breadth of land be ſown with wheat, than was ever known with us. Cattle are ling poorly, and indeed the ſale was never ſo dull; and the rea-n is, that fodder is ſo ſcarce. Our grain markets have been ily riſing ſince harveſt; and annexed you have a ſtate of our ices.

American wheat,	73s.	per boll of 240 lib. avoirdupois.
Dantzic ditto,	72s. to 75s.	Linlithgow boll.
Hamburgh ditto,	70s. to 72s.	ditto.
Britiſh ditto,	68s. to 75s.	ditto.
Barley,	48s. to 54s.	per Stirling boll.
Oats,	35s. to 48s.	per ditto.
Ditto, Baltic,	38s. to 46s.	per ditto.
American flour,	80s.	per barrel.
Flour of our own manufacture,	110s. & 115s.	per ſack.
Beſt oat meal,	3s. 1d.	per peck.
Beſt barley ditto,	2s. 2d.	per ditto.
Beſt peas ditto,	2s. 6d.	per ditto.
Hay,	1s. 6d.	per ſtone, Tron weight.
Straw,	1s.	per ditto.
Beef and mutton,	6d. to 9d.	per lib. of 22 ounces.
Veal	8d. to 10d.	per ditto of ditto.

Eaſt-

Eaſt-Lothian Quarterly Report.

Since our laſt report, the weather has been generally favourable to the operations of the ſeaſon; and the circumſtances under which field-labour has been executed, afford a ſtriking contraſt with thoſe of the laſt year, when very little work was performed, in what may be called a huſbandman-like manner. During December, however, the weather has been extremely variable; but tillage is ſo far advanced, that a temporary ſtoppage of aration is not of material conſequence.

The ſowing of *winter wheat* was finiſhed under favourable auſpices; and the young plants preſent a healthy and vigorous appearance. Thoſe firſt ſown were in danger of advancing too faſt, had they not experienced a check about the end of November, from eight days of ſevere black froſt. The later ſown fields are only putting forth a braird; ſo they cannot be conſidered as yet out of danger. The quantity of wheat ſown, has been nearly the ſame as in other favourable ſeaſons; but an addition will be made in the Spring months, by ſowing a number of dry lands now carrying turnips.

The *grain markets* have greatly advanced during the quarter, though they have been tolerably well ſupplied. Prices have fluctuated much, as will always be the caſe when matters are out of their common courſe; but it is hardly to be expected that a ſteady reduction can happen under the preſent circumſtances. Notwithſtanding that every practicable attempt has been made to prevent a waſte of fodder, yet, the ſtack-yards are comparatively as much diminiſhed, as ever was known in this county at this period of the year, and, without the ſtricteſt economy, will, in many parts, barely carry on the working and lean ſtock till graſs arrives. The openneſs and temperature of the Winter has allowed greater benefit from the paſtures and ſtubbles than commonly happens; and fat cattle were ſeldom kept longer out than has been practicable this ſeaſon.

The *butcher markets* have been well ſupplied, and prices have not experienced much alteration. Decent fat is worth 7s. per ſtone, including the offal; but will probably advance in a little time, when the glut upon the market, which always prevails at the latter end of the year, is removed. Fewer cattle and ſheep than uſual are fed, in this county, upon turnips, from the general failure of this root, though probably the number is as great as during laſt year. Lean ſtock decreaſed in price conſiderably in November; and the quantity, wintered, will hardly amount to one half of what uſed formerly to be kept, which will have a powerful influence upon the Spring markets. Many farmers are giving an evening feed of *turnips*, or *roota baga*, to their horſes;

horſes; which has anſwered well, and proves a conſiderable ſaving.

The *working people* are, in general, well attended to in every pariſh; and ſupplies of meal, at prices greatly reduced, are furniſhed to them by the heritors and tenants. This, in ſome caſes, is defrayed by voluntary contributions; and, in others, by an aſſeſſment upon the landed property; which, undoubtedly, is the moſt equitable way of proportioning the burden. So long as theſe aſſeſſments are under the direction of thoſe who are to pay them, there is little danger that they will be attended with ſimilar conſequences to thoſe felt by our ſouthern brethren, in the adminiſtration of poor rates.

Mid-Lothian Quarterly Report.

FROM OCTOBER 1. 1800, TO JANUARY 3. 1801, INCLUSIVE.

AMID the alarming preſſure of ſcarcity which at preſent exiſts, from the occurrence of two defective crops in ſucceſſion, it is matter of real gratulation, that, from the very favourable circumſtances under which the preparations for the ſucceeding crop have hitherto been carried on, there is at leaſt ground to hope, that a third year of famine will not be added to the direful liſt; but that the labours of the huſbandman, this ſeaſon, propitiouſly begun, will finally be crowned with ſucceſs. Perhaps, in no ſeaſon, has there been ſo much land ſown with wheat, as in the preſent; and aſſuredly, in none has it been accompliſhed in better order: whilſt, from the general ſtate of the weather, ſo favourable for tillage, all other field operations are ſo far advanced, as muſt, in ſome meaſure, have a tendency in favour of the different Spring crops that remain to be ſown, from the farmers having leſs now to do than ordinary, and, of courſe, more choice as to the time, and more ability to do juſtice to the ſubject. Whilſt, with ſatisfaction, we ſtate theſe circumſtances, we muſt, at the ſame time, deplore the preſent high price of grain, and continue to recommend, as we have hitherto done, the moſt rigid economy in the uſe of proviſions, as the beſt means for lightening the calamity; for, however brightening the preſent proſpect may ſeem to be, it is ſtill liable to be obſcured; and, at all events, it muſt be near eight months to come before the enſuing crop, were it even to be the moſt abundant, can be brought to our aid. With regard to the prices to which every kind of proviſion has riſen, we ſhall merely note them down *in record to future times*, and with the ſincere hope, that no ſuch an occurrence of calamitous ſeaſons will again happen in our day, to occaſion ſuch another ſcarcity.

Prices

Prices at the commencement of the year 1801.

	L.	s.		L.	s.	d.	
Wheat from	3	5	to	3	10	0	per boll, 4.114 buſhels.
Beans from	2	2	to	2	10	0	ditto, ditto.
Barley from	2	5	to	2	12	0	ditto, 5.962 buſhels.
Oats from	1	18	to	2	2	0	ditto, ditto.
Oatmeal from	2	2	to	2	5	0	ditto, 128 lib. Amſterdam.
Potatoes -		-		1	10	0	ditto, 4 cwt. Avoirdupois.
Quartern Loaf		-		0	1	6	69$\frac{1}{2}$ oz. Avoirdupois.
* Hay -		-		0	2	0	the ſtone, 22 lib. Avoirdupois.
* Oat Straw	1	4	to	1	5	0	*p.* kemple, about 15ſt. hay wt.

It is remarkable, however, that butcher meat is comparatively low. Beſt beef may be had at 6d. the lib, and under; but this is owing to the extreme ſcarcity of provender of all kinds, which occaſions every animal, ſheep, nolt, or ſwine, to be killed, that is at all fit for the market.

We muſt, however, put our readers on their guard, in comparing theſe prices with the price in other years of ſcarcity, that reſpect muſt be had to the *value of money*, which has rapidly declined in the preſent day, as may be inferred from the price of almoſt every article in uſe having greatly advanced; but, more particularly, the *price of labour* itſelf is now *nominally double* of what it was but 20 years ago; and this, not in conſequence, as ſome people fancy, of the riſe in the price of proviſions, but has been increaſing gradually, in proportion as money fell, till about two years ago, when it was nearly as high, in the midſt of plenty, as it is yet.

Return

* The ſcarcity of hay and ſtraw, which cauſes the above high prices, is a ſubject more to be regreted by the inhabitants of Edinburgh; becauſe it is, in a conſiderable degree, local; theſe articles not being near ſo ſcarce nor dear in the weſtern counties, even in Lanarkſhire, within 30 miles of town. The ſame remark applies to potatoes; and there can be no doubt, that the difference in the price would do more than defray the expence of bringing them from thoſe diſtant diſtricts. But, unhappily, the prejudices, ſo ſtrongly and ſo unjuſtly founded againſt *middlemen* or *foreſtallers*, as they are in deteſtation termed, has prevented, and muſt continue to prevent, all ſpeculation in the view of ſupplying Edinburgh with theſe neceſſaries from ſuch a diſtance; for neither the original grower, nor the ultimate conſumer, (for all the ſmall quantity, at a time, which the one can ſpare, and the other has a demand for), will ever undertake it. It muſt be the profit ariſing from an *extenſive* dealing alone, that would allure any perſon to embark in ſuch a buſineſs.

Return of grain, flour, &c. imported and exported at Leith, from the week ending October 18, to the week ending January 3. 1801, converted into quarters, in the same proportion as stated in last Number, p. 474.

	Qrs.
Imported coastwise - - -	15,459
Foreign - - - - -	17,382
Total imported - -	32,841
Deduct exported coastwise - -	18,880
Remains for Edinburgh, &c. - - -	13,961

Meal sold in Edinburgh market, for the last fourteen weeks, ending January 1801. viz. Lothian, 3754; South country, 30; total, 3784. Wheat sold in Haddington market for the same period, 4053 bolls.

Extract of a Letter from Inverness, January 1.

'From the continued fineness of the weather since the conclusion of harvest, a greater proportion of land is ploughed than customary at this period of the year; but, for five or six days past, we had a severe frost, with a little snow on the coast, and much upon the hills, which has gone off last night, and the thaw promises to be lasting. Much about the usual quantity of wheat is sown in this neighbourhood: indeed, the breadth of ground occupied here with that grain, is at no time great, though, in favourable seasons, the crop is by no means defective, either in quantity or quality. Our crop of all grains is fully one third short of an average; and this county, which generally produces a sufficiency for the consumption of its inhabitants, will this year, notwithstanding every economical exertion, stand in need of eight or ten thousand bolls. Our present prices are, for wheat, 50s. to 60s.; barley, 45s. to 55s.; oats, 40s. to 45s. (the latter per boll of five firlots); potatoes, 24s. Hay, 2s. per stone. Beef and mutton, 4d. to 6d. per lib. Fodder is exceedingly scarce, and, if the Spring is backward, many cattle must starve. A great proportion of our turnips will be eaten by the young stock; consequently, the number of fat cattle, this Winter, will be less than common, and prices of butcher meat higher in a few months.

A subscription was lately set agoing for enabling the town of Inverness to sell meal at reduced prices to the poor, which has been liberally encouraged. A considerable quantity of meal and grain is already purchased; and, from the great exertions making, I trust a sufficient quantity, for supplying the inhabitants, will be soon secured.

In case your Caithness correspondent neglects to send his report, I beg leave to say, that the crop in that district has turned out well, and that the quality of the grain is uncommonly fine. It is supposed, that, after keeping the necessary quantity for their own consumption, they will be able to spare 25,000 bolls for supplying other places; which, I imagine, is more than can be done by any other county in the kingdom, of similar extent.'

Extract of a Letter from Muſſelburgh, January 5.

'I am happy to inform you, that our firſt attempt to eſtabliſh a corn market, has ſucceeded better than we expected. There were about 328 bolls of grain offered for ſale; and it is the general belief that the market will continue to flouriſh. To encourage people to attend, the Magiſtrates have very properly advertiſed, that no cuſtom will be demanded for the firſt year; and that a proper and ſecure place, for ſetting up grain or meal that may remain unſold, will be provided.

The ſituation of Muſſelburgh renders the eſtabliſhment of a corn market there, on each Saturday, a moſt eligible meaſure. Grain purchaſed at Haddington on the preceding day, by dealers in the neighbourhood, can, in this manner, be conveniently reſold to Edinburgh people, and others, who are at a diſtance from Haddington market; and much trouble will conſequently be ſaved to thoſe who are ſo ſituated. It is chiefly in this point of view, that Muſſelburgh market will be of utility to the public.'

Extract of a Letter from a Gentleman in the Neighbourhood of Perth, January 5.

'In this county, we have, in general, exceeded our ordinary ſowing of wheat; led on to this, from the unuſual good ſituation of the ground at the end of Autumn. I am perſuaded, that very few, even of our oldeſt farmers, remember the land working ſo well, which undoubtedly warrants ſanguine expectations of a good return, when followed with a Winter ſeaſon like the preſent. In this quarter, laſt October was, in point of climate, equal to the temperature of our ordinary Summer months, which, with moderate weather in November, brought on and continued a vegetation beyond any thing I ever ſaw. In the laſt week of December, we had a general fall of ſnow, with moſt intenſe froſt; but I am happy to ſay, that the new year commenced with a ſpeedy thaw, which ſtill continues.

The excellent weather we enjoyed after harveſt, for ſo long a time, was indeed of infinite benefit to the country at large, and more particularly to thoſe farmers who had young ſtock in hand, and a ſcanty ſupply of fodder in the ſtack-yard. For, had it not pleaſed *Providence* to bleſs us with the *latter rain*, which brought graſs for the beſtial, and thereby ſaved fodder, I am perſuaded many cattle would have periſhed for want. Now, I truſt, the fears are in moſt other places, as they are in this neighbourhood,

hourhood, almoſt removed; and that gratitude will occupy the place of fear in the minds of all.

In this pariſh, a plan was adopted, in the end of the year 1799, for relieving the poor. A fund was raiſed by the heritors, tenants, and reſpectable inhabitants, with which meal was bought and retailed out at one half of the coſt price, to thoſe who ſtood in need of aſſiſtance; and the good effects were very evident. From ſtarting early, the greateſt part of the meal was ſold at one ſhilling per peck. The ſame plan has been agreed on this ſeaſon, with the reduction of one third of the coſt price, with a view of extending the effects of the fund.

The price of wheat here is rather on the decline, owing, as I ſuppoſe, to the generality of farmers thraſhing out at this time of the year; of courſe, the market is fuller than it was ſome weeks ago, or that it will continue to be for ſome time after this. I do not think it proceeds from the crop yielding beyond what it had the appearance of when ſtacked. Other ſorts of grain are ſtarting. On the whole, our prices are always affected by the riſe or fall of the London market. It ſtrikes me, we are ſooner moved by this cauſe, than what they are at Haddington. Wheat in Perth, on Friday laſt, ſold at 63s. per boll, formerly 65s.

Barley	-	45s. to 48s.
Oat meal	-	2s. 11d. per peck, and very ſcarce.
Bear meal	-	1s. 8d. per ditto.
Beſt beef	-	6d. per lib.; Mutton 4½d. and 5d.

Extract of a Letter from Grangemouth, January 5.

"The prices of grain here are as follows—Wheat 65s. to 68s., the quality fine. Barley 50s. to 55s., the quality alſo fine, but the quantity ſhort. Oats 40s. to 46s., and *meal* very poorly. Beans and peas 48s. to 55s. The demand for oats and beans has leſſened, theſe two weeks, in conſequence of numerous arrivals of the former, both foreign and coaſtwiſe; and of the latter from different home ports, but chiefly from London. There is nothing as yet done in this ſhire to relieve the induſtrious poor; but a meeting of the heads of families in the pariſh of Falkirk is to be held in a few days, for the purpoſe of conſidering of the beſt means for alleviating their diſtreſſes.

There is little done hereabouts in field-labour for Spring crops till next month, as, when we have freſh weather at this ſeaſon, it is uſually accompanied with rain, which lays all the low lands under water. We believe the quantity of wheat ſold is rather larger than uſual. Wheat here, and at Glaſgow, is ſold by the Linlithgow firlot; but, in order that your readers may have a comparative

view of the *Stirlingſhire* meaſure with the *Wincheſter buſhel*, we inform you, that, from experience, we find, that

100	Wincheſter quarters	of	Wheat are equal to	188	Stirling bolls.
100	do.	do.	of Beans or Peas	175	ditto.
100	do.	do.	of Barley or Oats	123	ditto.

Herrings, both of the Weſt country, and Forth fiſhings, are preſently ſold at 42s. per barrel.'

Extract of a Letter from a Farmer in the upper part of Aberdeenſhire, December 31ſt.

'The exceſſive Summer drought occaſioned our crop here, as in other places, to be much ſtinted in its growth. Bear was the only tolerable crop in this diſtrict; and, upon trial, this grain for the moſt part is found equal to that of the beſt years. Oats do not exceed one half of an average crop, and meal very poorly, whatever newſmen may ſay concerning their great returns. Fodder for *Winter keep*, is ſcarcer than known by the oldeſt man alive. Upon the upper part of *Dee-ſide*, the ſcarcity is particularly felt; indeed, their crop was, literally, worth nothing. Bear and ſtraw is ſelling at four guineas per Aberdeen boll, (about nine per cent. above Linlithgow), and oats, per ſame meaſure, at three guineas; while the quantity of ſtraw is very trifling. I witneſſed a roup in Cromar laſt week, where oats with fodder were thought to ſell at four pounds per boll, being ſold in bulk without taking a proof.

The preſent prices of grain and meal are—Oats, 45s. Beans, 55s. Oat meal, per boll of nine ſtone, 45s. Bear meal, 32s. Our ſupply is chiefly from the diſtrict of Garioch, where the crop was not ſo poor as in the higher parts of the county. Turnips, in general, are a good crop; and hay, upon deep ſoils, was tolerable, but upon thin lands would not cut.

The value of labour is now much reduced; a thing that was much wanted with us. A man who, in 1798, got ſix pounds for ſix months work, now cheerfully accepts of forty ſhillings; and other claſſes in proportion. What is better, a great deal of more work is done, than when the wages were at a triple rate; a circumſtance not only advantageous to the farmer, but of great utility to the public. If good weather, and ſeaſonable tillage, are the means of procuring a good crop, we have every cauſe to believe, that this county will be highly favoured in that reſpect next year; for better weather we never experienced; nor was ploughing ever farther advanced in the end of December, than it is at this day.'

Extract

Extract of a Letter from a Gentleman in the Middle Ward of Lanarkſhire, December 29th 1800.

'As a reader of your Magazine, and a well-wiſher to that laudable undertaking, I take the liberty of ſending you ſome obſervations on the ſtate of the crops, markets, &c. in this part of the country; which, if approved of, may be inſerted in your next Number.

The wheat crop was very thin, and very little ſown laſt year, owing to the former wet ſeaſon; but the grain is good. Oats, in general, are alſo a thin crop, and little ſtraw, owing to the ſevere drought following the wet ſeed-time. In the high or mooriſh grounds, the crop is nearer an average than in the lower grounds upon the Clyde; but, in theſe high grounds, there was much leſs land in tillage than was uſual, owing to the backward Spring, and the high price of ſeed. The grain is good, and yields, in general, from 12 to 14 pecks of meal per boll, though, in ſome places, it is as low as 9 or 10 pecks. Beans are a poor crop in general, but few are ſown. Peas are in general a good crop. They have not much ſtraw, but are extremely well podded, and will compenſate in ſome degree for the deficiency of the wheat crop. Potatoes good in quality, but cannot be reckoned much above half an ordinary crop, conſidering the quantity planted, which was perhaps the double of any former year. When the deficiency of tillage in the high grounds, and the deficiency of crop in the low grounds, are conſidered, I think, upon the whole, that we have not more than three fourths of a fair average crop. Hay was in general a very good crop, and extremely high in price. It ſold from the rick at 1s. per ſtone, and is now as high as 1s. 6d. per ditto. The dryneſs of laſt Summer proved favourable to Summer-fallow; and the wheat ſown looks in general very promiſing. It is believed there never was ſuch a general ſcarcity of fodder as this ſeaſon; and the conſequences to the cattle muſt no doubt prove fatal, unleſs the Spring turn out very favourable.

The labour of the field, I mean the Winter ploughing, is in conſiderable forwardneſs. The ground that is ploughed looks extremely well, and bids fair for a good crop to follow. Several fields of old graſs land are let for ploughing this ſeaſon, which afford hopes that the enſuing crop will bring relief to the poor and labouring part of the community, by reducing the preſent high price of grain. Our markets for grain have been much on the advance for ſome time paſt. Oat meal retails at preſent about 2s. 8d. per peck; Peas meal about 1s. 10d.; Bear meal about 1s. 9d.;

Butcher meat from 6d. to 7d. per lib.; Butter 1s. 3d. and 1s. 4d. per lib.; Skim milk cheeſe 6d., and new milk cheeſe 8d. and 8½d. per lib., all Tron weight. Potatoes ſold at the end of harveſt, which is the period of the moſt general ſale, from 1s. 2d. to 1s. 4d. per water peck, which is a meaſure of about fourteen Scots pints, and we reckon 16 pecks to the boll; I believe they ſell now at 1s. 6d. per peck.'

Banffſhire Quarterly Report.

THE weather has been uncommonly favourable for field work; Beſides the land for barley, turnips, and fallow that have got the firſt furrow, there is more ploughed for the ſeed than I ever remember at this ſeaſon. The very high prices we are getting for victual, does not ariſe from any deficiency in the crop of this county; for I imagine, at a fair computation, it will be found equal to an average. The oats, excepting on hot land, are uncommonly productive; and 4 firlots will give 8 ſtone of meal. There is but a ſmall proportion of wheat in this county, and it comes far ſhort of being a fair crop; in many places not half a one: This is, in a great meaſure, owing to the farmers truſting to country ſeed of laſt crop, which was ſo weak, that not above one half of it vegetated. I had on my farm five acres ſown with red Kentiſh wheat, imported laſt ſeaſon, which yielded 60 bolls of very fine grain; 20 of which I ſold for ſeed. Summer-fallow was the preparation, with a ſlight liming of Engliſh ſhells, harrowed in with the ſeed. It was laid down with graſs ſeeds in the Spring, which flouriſhed up amazingly. The wheat, in general, is of a very fine quality: The firſt that was ſold brought only 40s.; but 55s. is now given, and 3l. is ſpoke of. Oat meal 40s., with the merchant's allowance for not leſs than a third part of bear mixture; a practice you will not much approve of. It was only 32s. a few weeks ago; Bear meal 1s. 6d. per peck of 8 lib.; Oats 37s. per boll; and Barley 2s. 6d. per ſtone, if it weighs 8 lib. There has been a great ſlaughter of cattle this Autumn, which has been the cheapeſt proviſion. Beef was ſelling as low as 2d. to 3½d.; but the beſt is now advanced to 4d. and 4½d. per lib. There are upwards of 30 killed in Banff every week, of a ſmalliſh ſize, from 15 to 30 ſtone weight, and of all ages; beſides ſome mutton, which ſells, the beſt of it at 4d. Good mutton is now turning ſcarce; as feeding ſheep with turnip, is not generally practiſed, unleſs on my own farm, and one or two more in this county. I have introduced the Northumberland, or Border-ſide ſheep, which are likely to do very well; and I can ſell them at an earlier period than the ſheep we had formerly; ſometimes wedders at 18 months old.

old. The corn yards are diminiſhing very faſt;—not much fuller than they are generally about Candlemas. Oats and ſtraw, at different roups, about three weeks ago, have given 50s., 60s., and ſome as high as 3l. 7s. per boll; while hay is only ſelling at 1s. 6d. per ſtone. The oats were very ſhort, and computed not to exceed 10 ſtones of ſtraw to the boll. Where *furze* can be had, they are ſubſtituting them for fodder:—the labour being far advanced, enables them to beſtow more of their time for that manufacture. Some have mills for manufacturing them, but the flail is the moſt common way. Had not the cattle markets turned briſker towards the end of Autumn, and cleared the country of an over-ſtock, a number of cattle would have died. Potatoes are not a productive crop, and ſell at 16d. and 17d. per peck.'

January 6. 1801.

Extract of a Letter from Haddington, January 10.

'At our market, yeſterday, though the quantity of wheat preſented was not large, prices declined conſiderably. The beſt price was 65s. per boll; but ſeveral parcels, of good quality, were ſold at ſeven or eight ſhillings lower. Buyers were ſhy, and ſome remained unſold.

Barley and oats went off nearly at laſt week's prices; the firſt from 46s. to 54s.; the latter from 35s. to 41s.; but the ſale of both was rather heavy. We had a full ſupply of beans and peas; but theſe articles being much in demand, ſold freely at advanced prices, ſome parcels as high as 50s.

In the appendix to the ſecond report of the Committee of the Houſe of Lords, we notice, that the crop of this county has been reported to their Lordſhips as equal to an average one. We are not acquainted with the ſource from whence this information proceeded; but if other counties have been reported in the ſame unfaithful manner, their Lordſhips muſt have been groſsly miſinformed. We are tolerably certain, that the crop is rather below, than above three fourths of an average one, taking all the grains complexly. Wheat is undoubtedly more below an average; for, it is believed, that the quantity ſown, did not much exceed one half of what was ſown in the preceding year: Therefore, allowing the produce per acre was as good as uſual, (which, in the greateſt part of the county, was not the caſe), ſtill the deficiency muſt be very great. Barley and peas are the grains neareſt an average; but of the latter, not many were ſown. Oats and beans are both very defective, being ſcarcely five eighths of an ordinary crop. The former ſuffered ſeverely by bad weather in harveſt; and the beſt of the grain was left in the field, the ſhake being ſo great.'

Tweedale Quarterly Report.

The weather, during the month of October, being for the moſt part dry, the harveſt was got finiſhed, in good order, by the middle of that month; but the crop, when brought to the ſtack-yard, wanted at leaſt one third of the ordinary bulk. A general alarm for ſcarcity of fodder, induced every farmer to keep his cattle and horſes out as long as the weather would permit, which was favourable for that purpoſe until Martinmas, when a ſevere fall of ſnow obliged every one to houſe them. In ſeveral inſtances, alſo, there was not only a loſs of ſheep by ſmothering in the ſnow, but alſo of ſhepherds periſhing by the ſtorm; a circumſtance ſcarce known in this county at ſo early a period of the winter. The Weather, however, both before and ſince, hath been friendly to labouring, which is farther advanced now than laſt ſeaſon, when the ſowing began. There will be, however, a very great want of fodder in this county, as the corn is already half-thraſhed; nor do we know where to apply for relief, as none can ſupply another. The grain, both in quantity and quality, is much ſuperior to laſt year, eſpecially the bear and peas. The oats will not be much more than half an average crop; and little of that grain can be ſpared for market, as the ſowing will be much more extenſive than laſt year. The oats give about 6¼ Dutch ſtones of meal, per boll of 128 Scots pints. The bear about 13½ ſtones per ditto. The peas about 13 ſtone ditto, of 90 Scots pints per boll. The potatoes continued to root well, and are good in quality, though ſtill neither ſo plentiful nor large as uſual. The curl is unknown in this county. The turnip, alſo, continued to thrive amazingly, and, where properly cultivated, the crop is good; conſequently, the caſt ewes for feeding, advanced in price, from 8s. and 9s. to 11s. and 12s. a head. The aged cattle, in condition, for the ſame reaſon, found a ready market.

Oat meal ſells, at preſent, at	2s. 8d.	per peck.
Bear ditto - -	1s. 7d.	
Peas ditto - - -	1s. 8d.	
Pot barley . -	3s. 4d.	per ſtone.
Freſh butter -	1s. 2d.	per lib. of 22 ounces.
Ewe milk cheeſe -	8d.	per lib. of ditto.
Clover and rye-graſs hay	1s. 6d.	per ſtone.
Natural hay - -	1s.	per ditto.
Beef - - - -	6d.	per lib. Dutch.
Mutton - - -	5d.	per do. do.

January 2. 1801.

Extract

Extract of a Letter from a Farmer in the Upper Ward of Lanarkſhire, January 2, 1801.

'The prices of grain are ſtill upon the advance, in Lanark and Carnwath markets. The beſt oat meal ſells at two pounds three ſhillings and threepence; peas meal, 28s.; bear meal, 27s. all per boll of 8 ſtone. Oats are ſelling from 30s. to 40s.; rough bear, 43s. to 44s.; and barley bear, 48s. to 50s. a boll. Potatoes at 13s. a boll, Linlithgow barley meaſure. Hay gives 1s. 6d. to 1s. 8d. per ſtone; and ſtraw, 1s. per do.

Beef and mutton, at Lanark, are ſelling from 6d. to 8d. a ſtone, Dutch weight. The months of November and December were very favourable for getting the Summer-fallow land ſeed-furrowed, and every kind of labour is in great forwardneſs. The crops, in general, are giving well from the ſtraw; and, if the weather continue freſh and favourable, the ſcarcity of fodder will not be ſo much felt as was expected. There is a conſiderable part of old graſs land in this part of the country, that is to be converted to tillage, which will help to reduce the price of corn next ſeaſon. The proprietors are letting it out from 6 guineas to 8 guineas per acre, for one crop. Several farmers in this place are aſſiſting the poor; ſome are giving them 2 bolls of oat meal, and others one boll, according to their circumſtances.'

ENGLAND.

Lancaſhire Quarterly Report.

The weather has been, lately, very wet and cold; ſo very wet, that many of the lowlands and potato grounds have not been got ſown with wheat; and ſo cold, that the thermometer ſtood frequently at 32 degrees, although no froſt. At this date, it is as high as 46 degrees, and we have ſome days like April weather.

Grain of all kinds continues upon the advance. Wheat, 25s. per buſhel of 70 lib. Barley, 15s. Oat meal, 4l. 10s. per load. Potatoes, 5s. 6d. per buſhel. Cheeſe, 10d. per lib. dropped a little laſt market-day. Pork, 70s. per cwt. Store pigs ſcarce and dear. Fat cattle, and calving cows, uncommonly high priced.—*December 22*, 1800.

Extract

Extract of a Letter from a Gentleman near Liverpool, Dec. 22.

'On Monday, the firſt of this month, we had a grand agricultural diſplay. Mr Thomas Payne of Orrel, near this place, having taken a large park from the Earl of Sefton, ſeveral of his neighbours offered him a day of *boon-ſervice* with their plough-teams; and there appeared, upon the ground, no fewer than 79 teams, each with three horſes, prime cattle. A perſon, who is a competent judge in theſe matters, valued the teams, upon an average, from 60l. to 70l. each. Ribbons, of a yellow ground, with the following inſcription—"Standpark, Dec. 1. 1800. Succeſs to the Plough," had been provided to decorate the hats of the ploughboys. Theſe were ſo liberally diſtributed among the nnmerous ſpectators, that near 1000 yards were given away in the courſe of the day. About 80 acres of ground, ſtatute meaſure, were turned over in a workman-like manner, in the ſpace of ſix hours.

A cold collation was provided at the farm-houſe in the park, with liquor for thoſe who choſe to partake, and a dinner was likewiſe provided at Orrel, for the workmen and the ſpectators. Among the proviſions for that day, were, half a beaſt, weight 360 lib. 3 bullocks, 2 hams, 2 neats tongues, 4 dozen of pork paſties, 36 large wheaten loaves about 12 lib. each, 6 buſhels of potatoes, and turnips, cabbages, carrots, &c. in abundance. It is ſuppoſed, that near 400 mouths were fed there on that day; for, liberally as every thing was provided, ſcarce a morſel was left unconſumed. About 8 barrels of ale, and 10 gallons of ſpirits, were drunk.

Upon the ſide-board ſtood a jug, 22 inches in length, and 4 feet in circumference, provided for this particular occaſion by the agricultural ſurveyor of the county, and therefore called "Mr Holt's Cream Jug," which held near a quarter caſk of ale, and was decorated in large and ſplendid characters, with the ſame inſcription as on the ribbons. From the contents of it (ſome excellent ale) the following toaſts were drunk:

The King and his Friends.
The Earl of Sefton.
The Rector of Sefton.
The Rector of Walton.
Succeſs to Agriculture.
Succeſs to this day's labour.
Thanks to thoſe Friends who have ſo generouſly ſtepped forward with their aſſiſtance on this occaſion.
May the Stand-Park anſwer the wiſhes of the preſent tenant.
A reward for induſtry, and relief to the poor.
May every lad who drove a plough this day turn out a good farmer.

The

The bells of the pariſh churches of Sefton and Walton uſhered in this feſtive day, and continued ringing during a great part of the performance. The whole concluded with general harmony and ſatisfaction.

I beg leave to acquaint you of a method practiſed by Mr Payne, the gentleman above noticed, to deſtroy the crows, who commit great havock in ſeed-time, and upon the potato crops. Having ſuffered repeated depredations upon his potato plantations, by theſe birds, who, with their ſtrong beaks, dug them out of the earth after they were planted, Mr Payne baited a common ſpring rat-trap with a potato ſet, which anſwered his purpoſe completely, by ſecuring the voracious plunderers.

Northumberland Quarterly Report.

The weather, during the month of October, having proved more favourable than in September and Auguſt, the late crops were much better harveſted than thoſe that were earlier; but, in all ſituations, except on real good loamy ſoils, the crops are very defective, both in reſpect to ſtraw and quantity of grain, when put in compariſon with a fair average crop. The quality is alſo conſiderably below par; the wheat and barley crops being ſo much injured by the rains, in the latter end of Auguſt, and beginning of September, that very few ſamples are produced, perfectly clear of ſprouted grains. The millers complain alſo of the oats producing leſs meal than the uſual quantity, particularly the Angus and common oat. When theſe circumſtances are combined with the ſcanty appearance of the ſtack-yards, there is reaſon to apprehend, that the produce will turn out leſs than was generally eſtimated. The bulk, or number of ſtacks, are little more than half the uſual quantity: and, though the very high prices may hold out the proſpect of making up the deficiency; yet it is to be feared, many farmers are ſo unfortunately circumſtanced, that, after deducting ſeed, and reſerving a ſufficiency for their families, ſervants, and horſes, they will have little to carry to market, particularly oats, as they ſeem to be the moſt defective crop of any: and this will be more generally the caſe with thoſe, whoſe farms conſiſt moſtly of very dry, light lands, or the oppoſite extreme of wet and clayey ſoils; but the occupiers of firm, fertile, and friable loams, will certainly reap great advantages from the unprecedented high prices.

We had about three weeks of very favourable weather in October, for getting in the wheat ſeed; and the young crops of wheat never looked better, nor had a more promiſing appearance.

The turnip crop is probably the beſt, or moſt generally good, ever remembered; yet they have been ſold at high prices, from

6l.

6l. to 9l. an acre. This is, in part, owing to the great alarm for want of Winter fodder, from the great deficiency of ſtraw; and, of courſe, the young cattle are allowed a larger proportion of turnips.

Potatoes, in reſpect to quantity, are ſomewhat below an average crop; and, what is very ſingular, upon many dry ſoils that in general grow them mealy and fine, they are this ſeaſon quite the reverſe; clammy, ſad, and watery.

In reſpect to fat ſtock, there are fewer ſheep upon turnips than has been for many years; but the number of cattle is increaſed. The deficiency in ſheep, is owing to the great demand for the ſouthern markets in the Autumn. The prices of beef and mutton, at preſent, are, from 6d. to 6½d. per lib.

Prices of Corn.

	s.	d.		s.	d.	
Wheat,	16	0	to	17	6	per buſhel Wincheſter.
Barley,	7	6	to	8	6	ditto.
Oats,	6	0	to	7	0	ditto.
Peas,	10	0	to	10	6	ditto.

Oat meal, mixed with barley, 4s. per ſtone.

Ditto, unmixed - - 5s. ditto.

Potatoes were at 2s. 6d. per buſhel, but are now got up to 4s. 6d and 5s.

We have had fine freſh open weather of late, and the ploughing and other agricultural operations are in great forwardneſs.

December 27. 1800.

Extract of a letter from Stafford, December 29th.

"I am truly concerned to inform you, that the price of grain advances every ſucceeding market day, and that there is no proſpect whatever of a fall. At our laſt market, wheat ſold from 23s. to 25s. Barley, from 15s. to 16s. Oats, 10s. to 10s. 6d. Peas, from 18s. to 21s.—all per buſhel of 38 quarts. I informed you in my laſt, that a number of the principal farmers, convened by the Mayor, had agreed to ſell their wheat at 21s. per buſhel; but this agreement, as might have been expected, was not long adhered to; for, while I and others were ſelling at that price, others were getting 28s.; ſo the matter dropped. As the price of bread is now almoſt out of the reach of the poor, we have raiſed, by ſubſcription, a ſum of money for purchaſing butcher meat and potatoes, to be diſtributed in quantities proportionally to the ſize of their families, which will enable them to purchaſe bread with the money received from the pariſh. As for rice as a ſubſtitute it is, like every other thing, advanced to double price.

I

I have ſome this day from London, which ſtands me 6d. per lib. I have been conſidering how herrings would anſwer, which are ſtrongly recommended by Government; and beg to hear, in courſe, at what price they could be purchaſed at Leith, or other parts in your neighbourhood.

My turnip crop has turned out greatly ſuperior to what I expected. Many of them weigh 18 lib., and they have enabled me to feed my numerous flocks and herds, thereby ſaving much hay for other purpoſes. I lately gave employment to many poor people in drawing them, and have topped and tailed about 130 cart load, which I hope to preſerve as food to my ewes at lambing time. I have lately had a few fine lambs from Dorſetſhire ewes.—My general ſort is of the large Leiceſter breed, which do not lamb till about the end of March.

Under the preſent circumſtances, when the population of the country is ſo much increaſed, and bread even ſo ſcarce, it is truly ſurpriſing that no meaſures are taken to bring a great portion of what are called waſte lands into cultivation. Within a mile of me, there are near 20,000 acres of land under this deſcription, a great part of which, is of as fine quality as any in the county, and, with the aid of the plough and the harrow, is capable of carrying excellent crops. I hope, when the Imperial Parliament meets, theſe matters will occupy their ſerious conſideration; at leaſt, I know few that deſerve it more.

The wheat lands have a moſt pleaſing appearance; and, in this county, the proſpect of that crop is a good one. This day, the weather ſet in ſevere, accompanied with ſnow, which will ſtop the progreſs of the young plants, and prevent them from running too much to ſtraw.

Extract of a Letter from Yorkſhire, January 1.

'I hope the means uſed by Parliament will tend to relieve the middle and lower claſſes of the people; for they are really in a diſtreſſed ſtate. My landlady, who has a large eſtate in this diſtrict, has ſent circular letters to all her tenants, requeſting them to ſupply her with a certain quantity of wheat, in proportion to the ſize of their farms, at market price, which, with the greateſt liberality, ſhe has ordered to be ſold to the middling and lower claſſes, at reduced prices. She has likewiſe ordered a quantity of ſoup to be diſtributed gratis, which will prove highly uſeful.

At Ripon market, this day, corn has gone off rather ſlowly; and I underſtand, that at Leeds and Knareſburgh, the prices of all ſorts have fallen. Prices at Ripon—Wheat, 17s. to 18s.; maſlin, 14s. 6d. to 16s.; barley, 10s. 6d. to 11s.; oats, 6s. 6d. to 7s. 10½d.; and beans, 10s. 6d. to 14s.—all per Wincheſter buſhel.

buſhel. Beef, per lib., from 4½d. to 6½d.; Mutton 6d. and 6½d.; Pork 8d. and 9d.; Veal 9d. and 9½d. Fat cattle ſell at preſent from 6s. 3d. to 7s. per ſtone of 14 lib. ſinking the offal.'

Extract of a Letter from Hull, December 31.

'Since my laſt, this market has been principally ſupplied with foreign grain; and that at a very high rate. An alteration took place at laſt week's market. Buyers were rather ſhy; and yeſterday, the ſupply being above the demand, a reduction of nearly 20s. upon the wheat was the conſequence; and a farther decreaſe is confidently expected. Many ſamples, both Engliſh and foreign, were ſhewn; but a few parcels only were ſold for immediate conſumption, at the following prices—Engliſh wheat, 130s. to 135s.; Peterſburgh, and other foreign wheats, 100s. to 120s.; Barley, 72s.; Beans, 84s.; Peas, 112s.; Oats, 42s.—all per quarter. At Beverley market on Saturday, prices of grain were alſo lower. Prices of other articles here, are—Lintſeed, 62s. to 66s.; Rapeſeed, 46s. to 50s. per quarter; Lintſeed cakes, 14l. 14s.; Rape ditto, 7l. 7s. per ton. Beef, by ſide or quarter, 40s. per cwt.; by pound weight, 5d. to 7d.; Mutton, 6d.; Pork, 7½d., and very ſcarce; Veal, 7d. and 8d.; Butter, 15d.; Potatoes, per peck, 1s. and 1s. 2d.; Milk, 2d. per quart; Ale, 5d. per ditto; Hay, 105s. to 110s. per ton; wheat ſtraw, 50s. and 52s. 6d. per ditto, delivered at any place in town.

Imported here, from September 1ſt to December 20th, as per Cuſtomhouſe books, 26,700 quarters of wheat, 715 quarters of beans, 379 quarters of peas, 600 quarters of rye, 8364 quarters of oats, 4620 quarters of barley, 2272 ſtone of wheat flour, 120,557 buſhels of lintſeed, and 88,488 buſhels of rapeſeed. A number of the ſhips detained in Ruſſia, were deſtined to this port with corn.

In conſequence of the high prices, the poor are in great diſtreſs, and rather turbulent. A riot took place on Saturday night laſt, when much miſchief was done in the market, and at ſeveral mills. We are all quiet now; but the military and civil powers are held in readineſs to act at the ſhorteſt notice.

The ſubſcription for relieving the poor has been very liberal. Good ſoup is delivered out at 1d. per quart, which ſtands the ſubſcribers 2½d. Bread is alſo given gratis, or at a ſmall charge. It is intended to extend the relief to rice, flour, coals, and potatoes; and a loan is raiſing, to purchaſe and ſell them out again at prime coſt, independent of the ſoup and other articles. Herrings from Scotland are alſo ſoon expected, which will increaſe our quantity of food. About 12,000 quarts of ſoup are given out weekly, in *Hull* and *Sculcoats*.

The

The appearance of the country is very favourable. Wheats look healthy and ſtrong. Graſs, from the late mildneſs of the ſeaſon, ſaves hay. We have now froſt, accompanied with ſnow.

Norfolk Quarterly Report.

The Autumnal ſeaſon has been exceeding fine; and the wheat ſeed was got finiſhed in the beſt manner. The graſs lands ſtill retain a beautiful verdure; and the ſheep upon them are thriving extremely well. Hay has advanced a little ſince laſt Report, as the quantity ſhipped from this diſtrict has been uncommonly large. The turnip crop is good.

There has been no general plan adopted in Norfolk for relieving the labouring people: in ſome places, the wages have been advanced proportionally to the riſe of grain; and, in others, wheat meal is ſold at reduced prices; while many do neither, but allow 9d. or 1s. per head, according to the number of a family, in addition to the uſual price of labour. At Lynn, the porters wages have been advanced, as alſo piece work; and a voluntary ſubſcription is made, which already amounts to 800l., to furniſh ſoup, potatoes, meal, &c. at reduced prices to thoſe in want; which is a great relief, and occaſions the people to remain very peaceable.

Any opinion reſpecting the proportion of the crop on hand, muſt be vague and uncertain; but I believe, in general, that one half, in moſt inſtances, is already delivered. The grain turns out drier, and better in quality, than was expected; but in other reſpects, the Report in laſt Number will be found as nearly correct as could be made out.

Prices of grain at preſent are: Beſt wheat, from 130s. to 140s.; Beſt barley, 84s. to 90s.; Second ſort, from 60s. to 80s.; White peas, 110s.—all per quarter of 8 Wincheſter buſhels. Beef, from 5s. 6d. to 7s. per ſtone of 14 lib.; Mutton, 6½d. per lib.; Pork, 8d.

Dec. 30.

Lincolnſhire Quarterly Report.

WHEAT is now ſufficiently aſcertained not to exceed two thirds of an average crop; and, of courſe, prices have riſen to a moſt exorbitant rate. Barley and oats may be conſidered equally good as in common years; but the great demand for the former, as a ſubſtitute for wheat, and the quantity of the latter ſhipped for Scotland, has kept up the prices higher than formerly expected. Beans and peas are ſo bad, as to prove, in many places, ſcarce worth thraſhing. Prices are—Wheat, from 110s. to 130s.; Barley, 70s. to 84s.; Oats, 45s. to 46s.; Rye, 90s. to 96s.; Potatoes, from 6d. to 9d. per peck.

Sir

Sir Joſeph Banks, Bart. has ſent a large quantity of rice, to be retailed out to the poor at 3d. per lib.; and ſays, when properly boiled with hogs lard, or any other ſort of fat, that one pound of rice will produce five pounds of nouriſhing food. Sir Joſeph alſo intends to furniſh us with herrings, to be ſold at reduced prices. The prevailing idea among gentlemen of property, is, to uſe no kind of bread but what is made of rice and potatoes; and, in particular to curtail the quantity of corn given to horſes.

The *rot* among ſheep, which excited great apprehenſions, has proved not ſo extenſive as was dreaded, and has occaſioned no ſerious loſs: Sheep, in general, are doing as well upon turnips as the moſt ſanguine minds can expect. Hay turns out of fine quality from the ſtack; and the appearance of the young wheats is ſo good, that well-founded hopes may be entertained of a plentiful crop of that grain being procured next ſeaſon.

The butcher markets are plentifully ſupplied. Beef ſells from 6s. to 6s. 6d. per ſtone of 14 lib.; Mutton, 6d. to 7d. per lib.; Pork, 8d. to 10d.——A bill for draining, embanking, and incloſing above five thouſand acres of our fens, is preparing to be introduced into Parliament; in which about forty-five pariſhes are concerned.

December 31.

Extract of a Letter from a Gentleman in Lincolnſhire.

"By a letter from a friend who reſides near Baltimore, in the ſtate of Maryland, dated November 4th, I am informed concerning the prices of grain, &c.; which will likely be an acceptable article for your Magazine. Wheat, at that time, was 15s. per buſhel; Rye, 6s. 6d.; Barley, 10s.; Oats, 3s. 6d. Beef, 6d. to 8d. per lib.; Pork, 8d. to 10d.; Mutton, 8d. to 10d.; Veal, 8d. to 10d. Butter, 1s. 3d. to 3s.; a turkey, 7s. 6d.; a gooſe, 7s. 6d.; milk, 8d. per quart. Potatoes, 3s. to 6s.; turnips, 3s. 6d.; both per buſhel."

Extract of a Letter from a Farmer in Wales, December 31.

"Owing to a continuance of favourable weather at the concluſion of Harveſt, our wheat ſeed was got finiſhed in excellent order; and the appearance of the young plants was, in no ſeaſon, more promiſing. I believe there is a greater quantity than uſual ſown; and the ſtock on hand, at harveſt, being ſmall, the demand for ſeed wheat has, in a great meaſure, been the chief cauſe of that article being at preſent ſo ſcarce. The wheat, this year, though not bulky upon the ground, yields well in the barn, and weighs heavier than uſual; and

and the little barley we have, is alſo good. Oats are univerſally ſmall in the grain, and many of them are required to fill the meaſure. Here we chiefly ſow black oats, and find this variety anſwer better than any other; for the white oats degenerate very faſt, and require a frequent change of ſeed.

Our prices are ſtill advancing. Wheat, in the neighbourhood of Cardiff, ſells as high as 50s. per buſhel of 20 gallons, (2½ buſhels Wincheſter). Barley at 32s. Oats 21s. per our meaſure, which, for this grain, is equal to four Wincheſter buſhels; but, in Brecknock and Caermarthen ſhires, prices are even higher. The maltſters cannot procure a ſufficient ſupply of barley, and many of them are uſing oats. Potatoes turned out a ſcanty crop; and, from being digged up when in full growth, they are not ſo dry and mealy as uſual, though they will probably anſwer well for ſeed. They are now ſelling at 3s. 6d. and 4s. per peck. Very few turnips are with us this ſeaſon; this root having generally failed. The weather has here been uncommonly favourable, which has occaſioned both hay and ſtraw to fall in price; the former may be bought at 4l. per ton. Butcher-meat of all kinds is dear, for this time of the year; beef from 4½d. to 7d. according to quality; mutton nearly the ſame; veal 8d. and 9d.; ſmall pork 8d.; large pigs for bacon, weighed whole, 9d. and 9½d. Freſh butter 1s. 3d.; ſalt ditto 1s. 1d. Beſt cheeſe 10d.; ſkim milk ditto 7d. and 8d.—all per lib. Avoirdupois weight.

Yorkſhire Quarterly Report.

The crops of wheat, barley, and oats, turn out good on the dry and well managed ſoils; but generally indifferent on the ſtrong and ill managed ones. Beans are moſtly in a failing ſtate, and yield very little. A great proportion of all ſorts of grain ſuffered much damage, from the ſprouting occaſioned by the wet weather in harveſt, particularly the barley, which ſome bad managers left in ſwath, to their aſtoniſhing loſs; a circumſtance more to be regretted, as the quality of the grain appeared excellent before this misfortune.

The growing wheats look extremely well; ſome of them on the warmer ſoils, rather too forward in growth: Much more ground is under that crop than the uſual proportion; ſo much ſo hereabouts, that the ſpeculations begin to turn towards the *barley and oats* of another ſeaſon. The fallows for turnips have, as uſual, almoſt univerſally received their firſt ploughing. What are called Summer-fallows, are here generally deferred till after the Spring ſeed-time, when the ſtrong ſoils turn up dry and broken: Whether or not this be good huſbandry in the main, I leave to better judges.

Turnips, in this neighbourhood, have generally failed, not being more than the fourth of a crop, on an average: Near York, however, and in ſome other parts, they are more abundant than uſual, which, when we conſider the drought of their growing ſeaſon, is remarkable. A conſiderable quantity of the after-graſs ſtill remains on the ground, and there appears no great deficiency of hay and ſtraw; yet hay is ſold at 5l. per ton; and, from the great expence of ſtall food, it is feared, that beef, in the Spring months, will be ſcarce. Corn is out of the queſtion; and lintſeed cakes are at 16l. 16s. per ton.

Potatoes have yielded leſs than an average crop; they are now ſelling at the price of 4s. per buſhel. Hops were unproductive, and remain dear.

Apples, though ſo plentiful laſt year, are, at this ſeaſon, ſcarce and dear in the extreme. I have long obſerved, that we have ſeldom two abundant ſeaſons of this fruit in ſucceſſion.

The price of all ſorts of grain in theſe markets is exceſſively high: It is at preſent in a trifling degree declining, which, it is hoped, may continue to be the caſe for ſome time; ſince, from the openneſs of the Winter, and other cauſes, it has never had the uſual fall ſince the Harveſt. The beſt wheat 18s. 6d. Barley 12s. Oats 6s. per buſhel.

Fat cattle, ſince Martinmas, have been ſold at comparatively moderate prices; but as the markets have been rather overſtocked, from the proſpect of ſcarcity of food for the ſtall, they are now reſuming an advanced price. Lean cattle are at reaſonable rates. Sheep, in good condition, are much in demand, and dear.

Horſes of all ſorts are low, and out of demand, from the high price of their food.

Beef, mutton, and veal, are at 7d. per lib. Pork at 8d. per ditto.

Subſcriptions are made for the poor in the great towns; and, in country pariſhes, the relief is generally laid on the rates, which are tripled and quadrupled accordingly. From 2s. 6d. to 3s. per week, per head, is allowed by the Juſtices to poor families; the deficiency of their earnings to be made out by the overſeers.

January 7th.

OBI-

OBITUARY.

At Kilduff, near Haddington, Robert Walker Eſq. of Preſton Tower.—Mr Walker was formerly farmer at Athelſtaneford, which place he removed from in 1797, at the concluſion of his leaſe.

At Groat-hill, Mr John Ferme, farmer.—Mr Ferme formerly poſſeſſed the farm of Hairhead, near Cranſhaws, and was connected with a number of the principal farmers in Eaſt Lothian. He was juſtly conſidered as a reſpectable character, and is much lamented by thoſe who were acquainted with him.

Lord Rokeby, an Iriſh peer.—His Lordſhip had a large eſtate in Kent, and was ſaid to be ſuch an enemy to the war, that he would not allow his tenants to ſow barley, leſt they ſhould promote it by the exciſes upon malt and ale.

At Ayton Law, Berwickſhire, Mr John Cockburn, a moſt reſpectable man, and a very intelligent, induſtrious, and ſucceſsful farmer.

At Norwood, near London, Mr Alexander Dudgeon, merchant in the Strand.—Mr Dudgeon was the eldeſt ſon of Mr John Dudgeon, late farmer in Tyningham, Eaſt Lothian, and had reſided in London and the neighbourhood for more than thirty years. His death is greatly lamented by his numerous friends.

At Tillipowrie, in Strath-Tay, Mr John Livingſton, farmer, brother of the late, and uncle of the preſent Mr Livingſton, merchant, Croſs Cauſeway, Edinburgh.

NOTES TO CORRESPONDENTS.

Our warmeſt acknowledgments are due to the Rev. Mr F. for his valuable communication upon *Monopoly* and *Foreſtalling*, inſerted in this Number. We will, at all times, be proud to rank ſuch a reſpectable character among our correſpondents.

A ſeries of intereſting papers, reſpecting American huſbandry, are received, which will be inſerted in our next Number.

We are rather at a loſs to comprehend what *Scotus* wants to be at. He firſt condemns *Summer-fallow* altogether, and is for blotting it out of the kalendar, and afterwards acknowledges its neceſſity in ſeveral caſes. We ſhall take the opinion of our readers upon this matter.

The

The Letter from "*A Novice,*" came too late for this Number, but ſhall afterwards have a place.

The handſome manner in which ſeveral of the Quarterly Reports and Letters of Intelligence have been communicated, excites in our minds more grateful ſenſations, than we can find words to expreſs. Senſible that this department of our work depends chiefly upon the exertions of our friends, we ſolicit a continuance of their favours, which will meet with the ſtricteſt attention.

Obſervations upon Mr Bailey's Comparative View of the Expence of Oxen and Horſes for Farm Labour, are received.

An Inquiry, by an eminent Political Economiſt, concerning the Quantity of *Bread Corn* required to ſupply the conſumption of the inhabitants of Great Britain, will appear in our next; together with a Review of the Argyleſhire Agricultural Survey.

No. VI. will be publiſhed on Monday the 13th of April.

*** It is in contemplation to publiſh a *third edition* of the *Firſt Number*. Gentlemen, who are in want of full Sets, will therefore pleaſe give in their names to the Publiſher.

☞ Some unforeſeen circumſtances have prevented the *Title-Page* and Index from being completed, but they ſhall be delivered with next Number.

N.B. The Subſcribers are reſpectfully informed, that, owing to the recent regulations of the Poſt-Office, Magazines cannot any longer be ſent through that channel. Every exertion will, however, be uſed to forward them by coaches or carriers; but Gentlemen at a diſtance will be ſo good as apply to their reſpective Bookſellers for their copies. Engliſh readers will be ſupplied by Meſſrs Longman & Rees, London.

THE FARMER'S MAGAZINE:

MONDAY, APRIL 13. 1801.

(N°. VI.)

PART I.

ORIGINAL COMMUNICATIONS.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Observations on the Means of Improving Haugh Lands.

GENTLEMEN,

THE following obſervations are offered through the medium of your Magazine, with a view to draw the attention of the public to a ſubject which, though of conſiderable importance, has hitherto been very much neglected. I mean the management of that deſcription of property, known in Scotland by the name of *haugh lands*, which in too many inſtances have been left either entirely, or in a great meaſure, to the mercy of the waters that run through them. In the lower parts of the kingdom much loſs has been occaſioned by this neglect, and many extenſive tracts on the banks of rivers and ſtreams, which might with ſmall expence profitable have been rendered very valuable, are at preſent to a great meaſure uſeleſs to the community.

In the hilly and upland parts the loſs is ſtill greater, as in many ſituations their beſt ſoil, and that on which their principal dependence for corn and hay is placed, is their haugh lands. Throughout the whole of theſe diſtricts, there are

hollows, between the different ranges of hills and high lands, through which rivers or rivulets take their courſe, upon the banks of which there is generally an extent of ſoil of a good quality, conſiſting principally of the fineſt particles of earth, that have been waſhed down by the rains from the higher grounds, and which, by the accumulation of ages, have formed a ſoil of ſuch depth and quality, as to be fit for the production of the moſt valuable crops. In their preſent ſtate, however, their value is trifling, compared to what it might be under different management; for, owing to the ſtagnation of water in ſome places, a conſiderable part is either covered with flags and ruſhes, or converted into moraſſes, and the remainder, owing to the frequent inundations to which it is expoſed, partly from the overflowings of the rivers or rivulets, and partly to the torrents which deſcend from the hills during heavy falls of rain, can never be cultivated with ſafety or advantage, for grain; even the ſmall ſpots that are reſerved for hay, are far from yielding certain or profitable returns, the whole crop being in many inſtances either much damaged, or entirely carried off by the floods in a very few hours; in that way, the cultivation of conſiderable tracts of the beſt ſoil in the kingdom has been abandoned, and the principal advantage at preſent derived from them conſiſts, in ſome places, of bad paſture, and in others, of a quantity of coarſe ruſhy hay.

The rivers or ſtreams that run through theſe haugh lands, being left entirely to themſelves, and having no proper boundary, generally take a ſerpentine courſe, and, by wandering through the valley in every direction, not only occupy three, four, or five times the ſpace of ground they ought to do, but by their frequent windings, the declivity is ſo much leſſened, that the water runs very ſlow, indeed almoſt ſtagnates at every turn; and, when ſwelled by any ſudden fall of rain, the banks are not only overflowed, but if by accident the adjoining lands are under tillage, or any part of the ſurface broke, the water frequently forſakes its old courſe, makes a new channel for itſelf, and in that way breaks, cuts up, and deſtroys, the beſt of the ſoil upon its banks. Thoſe who have lived upon the banks either of a conſiderable river, or even of a ſmall ſtream, eſpecially in the neighbourhood of high lands, muſt have obſerved many inſtances of the overflows, and conſequent devaſtation here mentioned.

Theſe evils, as already noticed, ariſe partly from the ſerpentine courſe of the water, and partly from the torrents that

ur from the hills: the firſt, by leſſening the declivity, re-
rds the courſe of the water, and occaſions an overflow at e-
ry turn; the laſt, by having no diſtinct channel, through
hich the water might be conducted to the bed of the river,
reads over and inundates the whole of the low grounds.
he above will be found a pretty juſt picture of that deſcrip-
on of property throughout the iſland, over the greateſt part
which the water has been allowed to wander at large for
es, without a ſingle attempt to remedy the evil by confin-
g it within proper channels.

Though intelligent readers will readily underſtand the
uſe of water taking a ſerpentine courſe, and doing ſo much
iſchief in places where no pains are taken to confine and
rect it into proper channels, it is preſumed, that ſome ex-
anation of it will not be unacceptable, eſpecially as ſuch ex-
anation will be found connected with the remedy to be af-
wards propoſed.

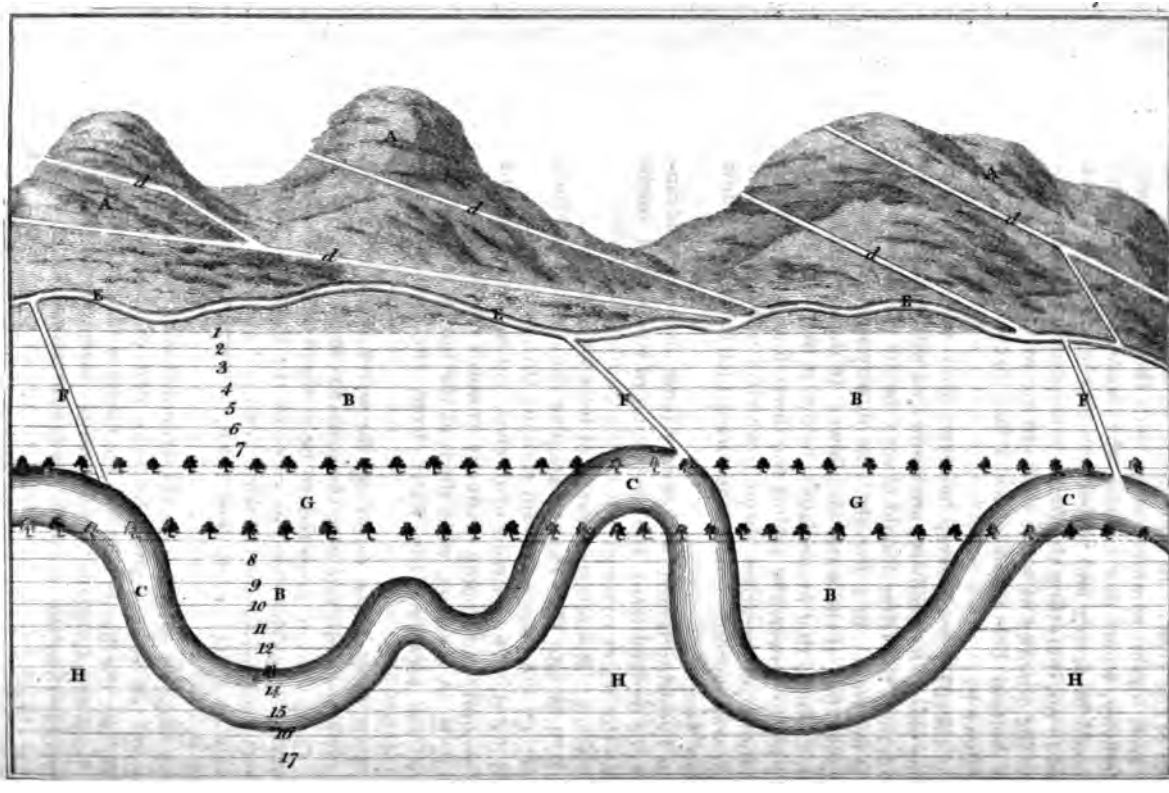
It is well known, that all bodies, whether ſolid or fluid,
nen once put in motion, continue to move in a ſtreight line,
leſs they are ſtopt or turned out of their courſe by ſome
ſtructing cauſe. If, in their progreſs they meet with a
dy whoſe powers of reſiſtance is equal to their weight and
locity combined, they will be rendered ſtationary; but if
e reſiſting body has only a power to alter, and not entirely
ſtop their courſe, they will recede, or fall off from that
dy, in an angle directly correſponding to that in which they
proached it: When a current of water, therefore, meets
th an obſtacle capable of altering its courſe, it recedes from
at obſtacle in an angle oppoſite and equal to that in which
approached it, and continues to follow that new direction,
l it meets with another obſtructing cauſe; in that way it con-
nues to traverſe the valley, every little obſtruction it meets
th altering its courſe, and giving it a new direction.

To remedy theſe evils, two things are neceſſary, *firſt*, to
ve the water a proper direction, and, as far as poſſible, con-
ne it within its own bed; *ſecondly*, to interrupt the torrents
at deſcend from the hills during heavy rains, and conduct
em through proper channels to the main ſtream. To ac-
mpliſh the former of theſe purpoſes, the firſt ſtep neceſ-
ry, is to give the river or rivulet as ſtraight a courſe as
ſſible to the neareſt outfall; in that way it will enjoy the
ll benefit of the declivity, and flow on without interruption:
he advantage of this practice will be very obvious to every
erſon of obſervation; for if, in the courſe of a mile, the fall

taken in a ſtraight direction is 15 feet, if the water is allowed to take a ſerpentine courſe, and make a circuit of three miles, it is plain that two thirds of the fall will in that way be loſt, and, in place of 15, will be only five feet per mile of this ſerpentine courſe, in many parts of which it will be nearly a dead level, and the water, in place of running off freely, will ſtagnate and overflow the adjoining lands.

Objections will no doubt be made to the propoſed plan of ſtraighting the courſe of rivers, on account of the expence of digging, and forming a bed of depth and breadth ſufficient to contain the whole of the water during floods: And certainly, upon the firſt view of a river or ſtream that has never been confined within proper channels, but allowed to traverſe the whole of the flat country in its courſe, any attempt to confine it, would by many be deemed at once an expenſive and a hopeleſs undertaking; upon a nearer examination, however, much of the difficulty will diſappear, and the plan will not only be found more practicable, but the expence much leſs than was at firſt imagined; for, if the new channel is only made deep enough in the middle, with a large and gradual ſlope on each ſide, the current (which by the ſtreighting will be greatly accelerated) will very ſoon do the reſt, and make a ſufficient bed for itſelf; beſides, as the miſchief above noticed, in moſt caſes, does not ariſe ſo much from the quantity of water as from its ſtagnation, when that is removed, no accumulation can poſſibly take place, the whole will run freely and rapidly off, and a much ſmaller bed will be required to contain it. This will be the caſe even with pretty large rivers where due pains are taken; but when it is conſidered, that the greateſt part of the waters that take their courſe through haugh lands, are ſmall ſtreams or rivulets, many of which are either dry, or nearly ſo, during the ſummer months, the ſucceſs of any attempt to give them a ſtreight courſe, or confine them within proper channels, will certainly appear much more flattering.

Thus much in regard to the ſtreighting of rivers or ſtreams: The ſecond object remains to be mentioned, namely, the interrupting the waters which pour from the hills, or high lands during heavy rains, and conducting them through proper channels to the main ſtream: To do this effectually, ſeveral open drains ſhould be cut along the face of the declivity, with a gentle inclination towards the ſtream into which the water, after being collected by theſe open drains in the face of the hill, may be let fall through other open drains at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ted diſtances, running alſo in a ſlanting direction towards e bed of the river. In ſome caſes, it will be neceſſary to ve croſs drains communicating with thoſe that run along e declivity, where that is done, the ſecond drain from the p ſhould be deeper and wider than that immediately above and ſo on, increaſing the dimenſions gradually, in propor- n to the quantity of water they are meant to contain, that the bottom being always wider and deeper than any of oſe above it.

It is neceſſary to obſerve, however, that when the drains nning along the declivity, are connected with each other by oſs drains, the latter ſhould always be cut in ſuch a direc- n as not to run in a ſtreight line downwards, but rather liquely; for, if the water is allowed to deſcend from the per drain to that immediately below it in a ſtraight line, will act ſo powerfully againſt the lower ſide, as to occaſion cavations and breaches through which it will eſcape, and that way not only render the drain uſeleſs, but overflow low grounds.

The following ſketch will convey ſome idea of the advan- e to be derived from the ſtreighting of rivers, and inter- ting the water coming from high grounds:

A. A. A. Repreſents a range of hilly ground;

B. B. B. B. and H H H. An extenſive haugh at the bottom,

C. C. C. A river or ſtream running through it.

d d d d d. Open drains or ditches, cut in the face of the h ground, and ſloping gradually towards the ſtream.

E. E. E. A deep and wide ditch at the bottom of the de- ity, for receiving the water from the ſloping drains d d d.

F. F. F. Drains for receiving the water from the ditch, E. E. and conducting it to the main ſtream.

G. G. G. A cut propoſed to be made in a ſtreight direc- n for a bed to the river, in place of the ſerpentine courſe C. C., the banks planted with trees.

1, 2, 3, 4, to 17, Ridges running parallel to the cut G. G.

The ground occupied by the propoſed cut, will not only much leſs conſiderable than the bed of the ſerpentine rſe, but the haugh land on the banks will admit of being l into regular fields, which can be laboured with much trouble than the irregular ſpots repreſented on the ſer- ntine banks, with the additional advantage of the whole

being completely ſecured, both againſt the overflowing of the river, and the waters from the high grounds.

It may perhaps be imagined by ſome, that if a ditch of ſufficient dimenſions is made at E. E. E., it will anſwer the double purpoſe of receiving and conducting the waters coming from the hills to the main ſtream, a miſtake that requires little obſervation to correct. Water, like every other body that is falling from a height, has its velocity encreaſed as it deſcends; in caſes, therefore, where it is allowed to run to the bottom in a ſtreight direction, before any attempt is made to interrupt it, the force thus acquired will be ſo great, as to bid defiance to any ditch or other contrivance that can be thought of for receiving it, or checking its farther progreſs; whereas, when received into the drains d, d, d, d, d, and led down in a ſlanting direction, its force will be found comparatively ſmall, and it may then be conducted to the bottom with great eaſe. Another very uſeful purpoſe will be anſwered, by having the open drains upon the declivity, namely, that of receiving and cutting off many of thoſe ſprings that break out on the ſides and near the bottom of all high lands, and render many valuable tracts ſwampy and unfit for cultivation.

The expence attending an undertaking of the kind propoſed will, when conducted with judgment, be found ſmall, when compared with the advantages ariſing from it; the ſoil, as well as the ſubſtratum of ſuch haughs, conſiſting for the moſt part of looſe incoherent materials, which admit of being dug or removed, with very little trouble.

Waters may be confined within their banks, and have a ſtreight direction given them in different ways; *firſt*, by ſtone; and, *ſecondly*, by turf banks, where ſtones are plenty, which they are upon the banks of almoſt every river and ſtream in Scotland, and in many parts of England; if the bank is properly ſloped and faced with them, it will be found completely to reſiſt the encroachment of the water, eſpecially if the ſtones are well bedded, and the interſtices blinded or filled up with ſand or clay; where a new cut is to be made, care ſhould be taken to have it of ſufficient width; after marking out the lines intended for the banks, the earth ſhould be dug out, taking it from the middle to the full depth of the intended bed, in ſuch a way as to form a regular and gradual ſlope to the top of the bank, which ſhould be faced or covered with ſtones in the manner above mentioned; the earth and other materials taken out, ſhould be employed

ng up the old bed of the water, which will render the
e uniform, and facilitate its future improvement. It
ontribute much to the durability of the banks, if, after
ork is finiſhed, a quantity of coarſe hay ſeeds are ſown;
by vegetating in the interſtices between the ſtones, will
effectually prevent the water from inſinuating amongſt
, and bind and give a degree of ſtability, as well as beauty
e whole, which it would not otherwiſe have.

caſes where the ſtream is not rapid, and where there
le riſk of the banks being waſhed or hurt during the ſum-
nonths, facing them with ſod, will form a very good
r to the water; where that is done, however, it will be
ary to drive ſeveral rows of piles into the bank paral-
the ſtream, which, (if they are ſufficiently ſtrong) will
reatly to the ſtrength of the work. In every caſe where
meant to turn a ſtream into a new courſe, the moſt
n way of rendering the work durable, will be found to
ſt in forming the new cut at leaſt a year before the wa-
let into it; in that way the earth of which the banks
mpoſed will be conſolidated, and the ſurface ſo com-
y protected by the growth of the ſod, or ſeeds ſown
it, that there will be little riſk of its being afterwards
n or penetrated.

e advantage of ſloping banks, as a defence either againſt
aters of the ocean, or rivers, is well known; it is alſo
n, that the greateſt part of the miſchief done, either by
a or rivers, is in ſituations where the ſhore preſents a
ndicular front to the water, and is at the ſame time
oſed of ſoft incoherent materials; and the higher the
, and deeper the water, the greater the miſchief in gen-
s; whereas, when the bank or boundary is a gentle
, the force of the water, in place of being increaſed as it
which is always the caſe where the boundary is a per-
icular, is gradually leſſened, riſing without injury to the
f the bank, and ſinking again to its ordinary bed in the
manner. To the above obſervations I have only to add,
additional benefit will ariſe from planting couch graſs,
ws, and all other plants that thrive in ſuch ſituations,
the banks where new cuts are intended to be made, the
of which will bind and ſtrengthen them, in ſuch a way
prevent their ſuffering from the water at any after per-
indeed, upon the banks of moſt rivers, they grow ſpon-
uſly, and greatly aſſiſt in confining the water, and pre-
ng it from changing its courſe.

The inſertion of this paper in your Magazine, will, I hope, ſo far attract the public notice, as to call forth the exertions of others better qualified to diſcuſs the ſubject, and at the ſame time point out to the proprietors and occupiers of ſuch lands, the great improvement of which they are capable, and the benefit that will thereby accrue to themſelves and the public. I am, Gentlemen, yours,

A. Z.

FOR THE FARMER'S MAGAZINE.

LETTER III.

Strictures on Farm-Management near London.

Auguſt 1799.

HAVING, in a former letter, at conſiderable length, ſtated to you with freedom my objections againſt the mode of fallowing practiſed with you, I ſhall endeavour to give you my idea how a fallow ought to be conducted on your ſoil, ſo as to enſure a good ſucceſſion of after crops; or, rather, I ſhall attempt to deſcribe how, what I conſider as a perfect fallow is managed, on ſimilar ſoils, in this country; and in ſo doing, ſhall uſe as much brevity as the nature of the ſubject, and its very great importance, can admit.

As ſoon as poſſible after harveſt, or, if rainy weather ſhould then render the ſoil too wet for ploughing with propriety, as early in winter or ſpring as poſſible, plough the land which is intended for fallow, with a gathering furrow: Immediately after which, take effectual care to open up all the water furrows in every part of the fields, and make croſs trenches with the plough and ſpade in every part where that operation is neceſſary, ſo that water may never be allowed to lodge on any portion of the ſurface. Immediately after ploughing, a labourer muſt go over the whole field with a ſpade, to clear the water furrows at every interſection with the furrows of the head and foot lands or ridges, to cut ſuch croſs trenches as cannot be drawn by the plough, and to deepen and clear out ſuch as have been made by the plough, and require that aſſiſtance.

Land of a ſtrong retentive nature, ſuch as yours, will not plough to any purpoſe when perfectly dry; for in that ſtate it neceſſarily riſes in large lumps and boards, and will not reduce into tilth, for receiving the influence of the weather

r admitting the cleaning after-operations of the fallow
eſs. No land whatever, more eſpecially ſtrong land,
ld ever be ploughed when in a wet ſtate; for it imme-
ly afterwards conſolidates again, and the ploughing had
y bit as well have never been given; indeed, after a wet
ghing, ſtrong land will be found more conſolidated than
had been left alone in the ſtate of ſtubble or *ley*. Be-
en wet and dry, which may be termed *mellow*, is the
e of land which ſhould be moſt ſeduloufly choſen for
y ploughing which it is to receive. When, indeed, it has
e been reduced into a proper tilth, it will afterwards ad-
of the future ploughings, harrowings, rollings, and pick-
, in a dry ſtate.

As ſoon in ſpring as other neceſſary operations will admit,
ugh the fallow land a ſecond time.

This ploughing is to be given with a cleaving furrow:
t is to ſay, the plough begins on each ſide of the ridge,
ving it down towards the water furrow, and ends by
ing an open furrow on what was formerly the crown or
of the ridge. If the field had been previouſly gathered
high crowned ridges, this firſt cleaving muſt be followed
mediately by another exactly of the ſame kind, by which
field will be reduced to a degree of leanneſs, which fits
roperly for the ſucceeding operation.

Immediately after this, croſs plough the field, in large
its or fearings, but not gathering, the plits of each bout
ng all laid one way. Then harrow and roll the land re-
tedly, gathering into heaps, with the hand or with forks
d rakes, all the couch and other root weeds that have been
ought up to the ſurface, and carry all off from the
ld. When theſe have been well rolled, by turning over
o or three times in a heap, they will anſwer well
an addition to your compoſt dunghills. Some farmers, to
e trouble and expence of carrying them from the fields,
rn the roots when ſufficiently dry, and ſcatter the aſhes on
e ſurface.

For reducing your ſtrong land into proper tilth, during
e operation of fallowing, a heavy roller filled with ſtrong
n knobs or ſhort ſpikes, would be a moſt uſeful imple-
ent. Its frame is ſurmounted by an old pair of cart
heels on a large axle. In carrying to the field, this imple-
ent is reverſed, the roller in the air, and reſting on the
heels. When acting in the field, the roller is turned down,
d the wheels are in the air.

Immediately after gathering off all the root weeds that
be brought to the ſurface, plough again end-long, with a
thering furrow, which lays your land out of danger from
weather. Then harrow and roll repeatedly; hand-pick
as before, and carrying off the weeds.

Should this operation not have cleaned the land ſuffici
ly, cleave down again the gathered ridges, harrow, roll,
pick as before: Then immediately gather up the lands ag
harrow and roll and pick again, if there are ſtill any roots
remove.

As a general and invariable rule, theſe operations are
be reiterated until every particle of couch and other
weeds has been picked out and carried off. The ſeed we
in the mean time, vegetate between the ſucceſſive operati
and are deſtroyed.

During theſe various operations, ſheep may occaſion
be allowed to take a walk over the fallow, to pick up
vegetating weeds or graſs roots that may come in their
But on no account whatever ſhould any one of theſe fal
operations be delayed for a ſingle hour, to give food to
ſheep, under the groſsly erroneous principle of turning
fallow land to profit Far leſs ſhould the fallow proc
be put off, from week to week, and from month to mo
that the ſheep may be ſtarved on the land in your abom
ble folds. Let the ſheep manure be invariably given to
paſture lands; which will evince their gratitude for the
nefit, when afterwards brought into tillage. The fall
muſt depend for their fertility on the ſtable and fold
dung, and ſuch other manures as can be procured, ei
from the farm or the neighbourhood.

When all theſe operations have been effectually perfo
ed, lead out the dung to the field, and let it be ſpread eq
ly over the whole ſurface: Then give the laſt or
ploughing, with a gathering furrow. Sow your ſeed,
harrow it in thoroughly; making the harrows begin t
work end-long the ridges or lands, then acroſs them, an
niſhing end-long. Then carefully open up all the w
furrows and croſs trenches, for carrying off the water in
ry part of the field. If theſe operations have been judici
ly performed, it will be the fault of the ſoil or ſeaſon if
huſbandman is not amply repaid by an abundant crop.

You may, perhaps, be ſtartled at the apparently g
increaſe of expence, which theſe numerous fallowing op

as muſt require. But, it will be only the firſt fallow off , in your foul lands, that will require all this lengthened de- . Every future fallow will require them to be performed a very reduced ſcale. Still, however, they muſt be per- med ſo as effectually to clear the land, and reduce it to a oper tilth. Beſides, when the mode of working, with one an and two horſes to each plough, which ſhall afterwards enforced, is taken into account, the apparent expence will very much diminiſhed, I ſhould ſuppoſe to leſs than a half r each ploughing; and I am confident to leſs than the preſent pence, upon the whole operations of the farm. And, laſt, ough not leaſt in conſideration, the additional expence, ould it ultimately turn out to be ſo, will be more than mpenſated, by the encreaſe of produce under ſuch manage- ent.

Beſides, after a perfect fallow ſo conducted, the land will ot require another fallowing for eight or even twelve years; ſtead of being fallowed, as it now is, every third or fourth ear. Inſtead of the fallow, or land thus thoroughly clean- d, leguminous crops, ſuch as drilled beans, or red clover, ill be ſufficient to keep the land in order; and, beſides the rofit, will occaſion a vaſt encreaſe of manure to the farm, r the product of other profitable crops.

Rrr.

LETTER IV.

Strictures on Farm-Management near London.

Auguſt 1799.

I would ſtrongly recommend, that all your ridges or lands ſhould be formed into regular ſtreight-lined oblong beds; and I ſhall endeavour to explain, as diſtinctly as poſſi- ble, the manner in which that operation is conducted in this country, aſſuming fifteen feet as the proper width, though ſome farmers prefer eighteen.

After the croſs ploughed land has been effectually cleaned, by its harrowings, rollings, and pickings, when your land is in a level or flat ſtate, or nearly ſo, the beſt ploughman on the farm takes three or more poles, according to the length of the field, of ſeven feet and a half each in length. Meaſur- ing off from a ſtraight lined hedge, in the direction you wiſh

to lay the ridges, he takes one length of the poles fr half or crown of the firſt ridge, and allows two feet o a graſſy balk, or ſlip, at the hedge ſide, which cann ploughed. All his poles being thus ſet upright in a ſt line from end to end of the field, and in the middle of th ridge to be ploughed, he begins his firſt plit in the l the poles, taking care to keep all the poles and the of his plough conſtantly in a ſtraight line between his h and plough them all down. While proceeding with thi plit, he regularly ſets up each pole again as he comes meaſuring off two lengths, or fifteen feet, for the cro the next ridge; ſo that, when at the end of his firſt pl his poles are up again in a ſtraight line, for the ſame c tion of the ſecond ridge.

Having finiſhed the firſt plit of the firſt ridge, he tur plough back upon his firſt track, and draws a ſecond plit upon the firſt, and thus completes the crown of the firſt: He then proceeds with his plough to the line of poles forms the crown of the ſecond ridge in the ſame ma and goes on in that way over the whole field.

The other ploughmen follow him, to gather up each in which they cannot well get out of the line he has ed out for them. In the next place, after all the end ridges have been formed, the principal ploughman, wi aſſiſtance of his poles as before, forms the crowns c head and foot lands or ridges, which are gathered up i ſame manner as the others. He next draws the wate rows, either by two bouts of a common plough with mould-board, or by one bout of a double mould-board p for each. Should there happen to be any diſhes or holl the field, acroſs the line of the ridges, a water furrow be judiciouſly drawn through there, in ſuch a manner carry the water off effectually. Finally, a labourer fo with a ſpade, clears all the interſections fairly out, and croſs-trenches where neceſſary, to let the water out o water furrows into the fence ditches or drains. Then, not till then, the field may be conſidered as in a ſtate of ſect ſafety. It is ſcarcely neceſſary to obſerve, that the operations, for clearing out all the water furrows, mu moſt carefully performed again, after the field is ſow harrowed out.

It will readily occur to you, that theſe directions ca ly be followed out, exactly as I have here given them,

ılar oblong field, with ſtraight lined fences.—Where any he fences are crooked, the ſide, or head, or foot ridge a- ſuch fences, muſt neceſſarily take the ſame curvature.
Where one end of the field is wider than the other, the ight ridges muſt neceſſarily be more numerous at the er end, and their tails muſt be drawn out into a wedge n: Such ridges we term *butts*; they might be named et ridges.
When any of the fences in a field are very irregular, I ld recommend to draw new ridges at a ſmall diſtance a theſe, in ſtraight lines, filling up the intervals between old and new fences with coppice wood or other planting. erhaps, on your ſtrong retentive ſoil, the narrow ridge- or *ſtitches*, as I think they are called, which are uſed in tfordſhire and Middleſex, might anſwer better, for wheat barley, than the fifteen feet ridges which I have deſcrib-
At all events, theſe muſt be as effectually laid dry, by fully opening the water furrows, and judiciouſly forming trenches, as in the other plan of laying down the field. when the fields laid down in this manner are in graſs, e muſt be carefully cleared out, at leaſt every ſpring and re winter; as graſs is as liable to injury, from ſtagnant r, as any other crop. For oats, the land certainly does require to be laid ſo high, as for other grain; but ſtag- on of water is in every caſe to be moſt carefully guarded nſt. I am, &c.

FOR THE FARMER'S MAGAZINE.

imate of the Quantity of BREAD CORN *required yearly to aintain the Inhabitants of* GREAT BRITAIN, *ſuppoſing the umber to be* 10,000,000.

ALTHOUGH any calculation on this ſubject muſt be liable much uncertainty, for want of data on many points from ich to eſtimate; yet as ſome facts are already known, one y, from probable conjecture, approximate ſomewhat near truth, with regard to others, and the general reſult of the ole.
The quantity of *bread* produced from a given quantity of *in*, is known almoſt to preciſion, and this knowledge will

be of ſome uſe in the preſent inveſtigation. Thus, in g of a medium quality, a buſhel of

	lbs.		*lbs.*	
Wheat, weighs	60	produces of flour,	48	and of bread,
Barley, ditto	48	ditto of meal,	37½	ditto
Rye, ditto	54	ditto	42	ditto
Oats, ditto	40	ditto	22½	ditto
Peas, ditto	60	ditto	51	ditto

Could the quantity of bread one uſes daily be alſo kno it would much facilitate this enquiry. This, however, not been altogether aſcertained; but in one caſe it has been known, and from it a probable conjecture may be fo ed of the reſt, and it is this: In Scotland, I believe all o a labouring man is allowed 2 pecks of oat-meal weekly his food, amounting in weight to 17½ lbs. averdupois, this in addition to the beer, the milk, or the broth, whic gets along with it. This meal will produce 23½ lbs. of br which is at the rate of 3½ lbs. daily, or 53½ ounces. W he is fed on wheaten bread, he gets 3 loaves a day, at fro oz. to 22 oz. weight each; for in this the practice is not form, but more generally 16 oz. than any, which make oz. daily. Such is the allowance to each reaper in har and ſuch is the quantity which a ſervant boarded in the ter's houſe receives the whole year over; but when eac bourer lives in his own houſe, with his wife and family arc him, there is no doubt that he makes a quantity conſider leſs to ſerve, and which ſhould be held in view, when fo ing an eſtimate of what the whole community at an ave may conſume yearly, ſuppoſing in this ſtage of the eſtim that all are fed on bread alone. It will be neceſſary, alſ make a diſtinction between the different claſſes, as comp of youth, able bodied, and ſuperannuated, and even men women, as theſe laſt are generally ſupported on a leſs a Having all this in view, I would conjecture, that all m between the years of 10 and 50, would require 42 oz. d the females of the ſame age 35 oz., and all of both ſexes low 10 and above 50, 28 oz. each.

Now, from the Statiſtical Account of Scotland, lately liſhed, it appears that, in the whole community, the pro tion in 1264 ſouls, is as under:

between 10 and 50	352 ſay at	42 oz. ea., hence	14784
as ditto	404 do. at	35 ditto	14140
exes below 10 & above 50	508	28 ditto	14224
Average of	1264	will hence be 1264	(43148)34.136*

his allowance of 34.136 oz. daily of bread to each indi-
l at an average, is made on the ſuppoſition, that the
e live upon bread alone, which is not by any means to
anted; for animal food was always to ſome extent, and
in conſiderable proportion forms, a part of the food of
people. How much this may operate towards a reduc-
in the uſe of bread, I have no particular data from which
timate, but merely from conjecture, which to me ſeems
able. I ſhould ſuppoſe that two thirds of the people eat
al food daily, and that, in conſequence thereof, they make
of only *one half* of the bread which otherways muſt have
required for their ſubſiſtence; but that the remaining
part of the people depend almoſt ſolely upon bread,
out receiving much of their ſubſiſtence from animal food
l: Hence, on this principle of calculation, one third of
above allowance of 34.136 ounces, will fall to be deduc-
in eſtimating the average of bread made uſe of by the
le body of the people, making 22.75 oz. daily to each in-
bual.

Now, if one perſon uſes daily 22.75. oz.
10,000,000 will uſe 227,500,000, ozs.

	tons.	*cwts.*	*lbs.*	
ch is equal to	6347	13	14	in a day
or to	44,433	11	98	in a week
or	2,316,894	10	70	in a year.

he above includes flour and meal from every deſcrip-
of corn uſed in the country. With regard to wheat, of
ch there is aſſuredly more uſed in the food of the peo-
than of any other ſpecies of grain, the quantity can per-

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t is a curious fact, that the proportion between males and females *born*, the reverſe of this, there being 35 males born for 31 females; where-e proportion in actual exiſtence as above, is 40 females to 35 males; , it ſhould appear, that about 10 out of 45 males born, either leave the ry, periſh in battle, or are loſt by ſhipwreck. Some few females alſo the country, or are loſt by ſhipwreck, which will make the proportion reater of males who diſappear from the population.

haps be aſcertained nearly to preciſion. Thus, the Ci
Edinburgh and country for 6 miles round is known, from
tual ſurvey, to contain about 110,000 inhabitants, and to
yearly about 165,000 * bolls, or 82,500 quarters of wh
which is at the rate of 6 buſhels for each perſon yea
a quantity, I ſhould ſuppoſe, that may be ſtated with a
ſiderable degree of accuracy, as the average individual
ſumpt of the whole nation at large; for although in Edinbu
itſelf, there is a conſiderable quantity of oatmeal uſed,
in a great proportion of Scotland, and a conſiderable ex
in the weſt of England, and in Wales, the people live m
upon oatmeal than wheat, yet as the great body of the I
liſh nation live altogether on wheaten bread, the eſtim
of 6 buſhels yearly to each perſon, at an average all
Great Britain, ſeems probable to be neither a too great n
too ſmall an allowance.

Now 6 buſhels is equal to 360 lb. of wheat; 288 lb
flour, and 384 lb. of bread, which is at the rate of 16. 8
ces of bread daily to each individual, at an average. Th
if one perſon uſes this a day

		tons.	*cwt.*	*lbs.*	
10,000,000 will uſe	10,520,584 lbs.	4696	13	52	in a d
		32,876	14	28	in a w
		1,714,285	14	52	in a y
which is of flour		1,285,714	5	95	
and of wheat		1,607,142	17	16	

which, at 60 lb. the buſhel, comes to 7,500,000 quarters.

Again, if we ſuppoſe, that, in a ſeaſon of medium ferti
an acre (Engliſh,) affords for *bread*, excluſive of the
20 buſhels; then, to produce the above, would req
3,000,000 of acres, and if crop 1799, confeſſed on all h
now to have been a bad one, had been deficient to the ex
only of 5 buſhels the acre, hence the failure on 3000,00
acres, would amount to 1,875,000 quarters, a quantity fi
cient to have loaded the whole Royal Navy of Great Bri
at preſent in commiſſion, although diveſted of its guns,
having no more hands on board than ſufficient to navig
the veſſels.

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* The Corporation of Bakers in the Royalty of Edinburgh uſe y
about 55,000 bolls of wheat, and theſe are on good grounds ſuppoſe
take *one third* part of all the wheaten bread in the city and about the di

It was before calculated, that the whole bread of every deſcription uſed in Britain yearly, amounted to 2,316,894 tons 10 cwt. 70 lbs; from this deduct the weight of wheat bread, as above, and the remainder, 602,608 tons, 6 cwt. 18 lbs. will be the quantity of bread made from other kinds of grain, ſuch as oats, barley, &c.

It will not be eaſy to aſcertain the exact proportion that theſe different ſpecies of corn bear to each other in the above quantity of bread, but I ſhould think that it will not be far from the mark, to eſtimate them in the following proportions in 10; viz. oats 6; rye 2; barley 1; and peas 1. Now, as ſtated page 132, the reſpective weights of each will be as under:

			lbs.
6 Buſhels of oats at	30 lb.	of bread each, will be	180
2 do.	of rye at 56	do.	112
1 do.	barley at 50	do.	50
1 do.	peas at 68	do.	68
10 in all, will average each			41.0

Now, if 41 lb. be accounted as equal to the bread from one buſhel, the before ſtated quantity, viz. 602,608 tons 16 cwt. 8 lbs. will be equal to the bread of 32,923,010 buſhels, or 4,115,376 quarters.

The next point to be aſcertained, and it would be very deſireable that it could be done with preciſion, is, How many buſhels from each acre in cultivation, on the average of theſe laſt mentioned crops, are converted into bread? It muſt be obvious, that it can be but very few, as *malt* conſumes almoſt the whole barley, and *horſes* the whole beans, and a great proportion of the oats. I muſt here conjecture, in a great meaſure at random, and from a very limited knowledge of the ſubject, that each of theſe acres produces for bread, in a ſeaſon of medium fertility, only one fourth part of the quantity that is thus produced from an acre in wheat, or 5 buſhels in all; from thence the number of acres altogether thus cultivated will be 6,584,602.*

* To this add 3,000,000 in wheat, as before eſtimated, makes 9,584,602 acres altogether in Great Britain under bread-corn. It is generally ſuppoſed, that in England alone there are 2,000,000 of acres yearly in bare fallow, beſides what is in turnip, potatoes, artificial graſſes, and various other vegetables. Probably the whole lands cultivated by the plough, may amount in Great Britain to 15,000,000 of acres.

The

But crop 1799, after *pinching greatly* the brewer of his *malt*, the horſes of their *feed*, and even the land itſelf of its *ſeed corn*, would not be able to ſpare above 2 buſhels each acre of theſe crops for bread to the people, and thus would ariſe a defection from the uſual means of ſubſiſtence, to the extent of 2,469,225 quarters, which added to the deficiency in the wheat crop already noticed, makes the whole amount to 4,344,225 quarters of grain of every deſcription in uſe, to be converted into bread, beſides the deficiency in the uſual ſupply towards malt, horſe-corn, ſtarch, &c.

How the nation ſhould have been able to exiſt at all under ſuch a deficiency in the crop (which moderately eſtimated, as I conceive it to be in detail, yet *collectively* becomes immenſe) ſhould now be attempted to be accounted for: And it can be accouuted for, from three diſtinct, but co-operative cauſes:—1ſt. The crop itſelf was *late* of being got in, and from the impreſſion general among the country people, of its being very defective, (in ſpite of all that the Newſpaper-men did to perſuade them to the contrary,) they did not begin to make ſoon uſe of it, after it was got in, inſomuch that it was near to the beginning of November, before they began to thraſh it out; while happily for the country in general, there was a ſufficiency of old grain in hand, (partly imported from abroad) to ſubſiſt on till that time; and, in aid to all this, the next crop 1800 was begun to very keenly, by the middle of Auguſt all over the iſland, and in many places 10 days ſooner. The ſaving by this alone, if only eſtimated at $2\frac{1}{2}$ months proviſion, (making crop 1799 ſerve only $9\frac{1}{2}$ inſtead of 12 months,) will be 2,419870 quarters. 2d. There was, from the preſſure of the *dearth*, much *economy* in the uſe of bread by all ranks of people. If we eſtimate this ſaving to be only at the rate of 2 oz. a day of bread by each perſon, it will amount to the aſtoniſhing quantity of 1.056,132 quarters in a year; and there was, beſides, a ſaving by *pub-*

The whole ſurface has been calculated as under:

	Sq. Miles.	*Acres.*	*Low Country capable of Cultivation.*	*Hills and Mountains incapable of Cultivation.*
England and Wales,	55,924	35,791,360	28,633,085	7,158,275
Scotland	30,600	19,584,000	6,266,880	13,317,120
Total,	86,524	55,375,360	34,899,965	20,475,395

lic kitchens, and other ſubſtitutes for grain. 3d. There was a very conſiderable *importation of foreign grain*, to the extent of not leſs, in all kinds, than 2,000,000 of quarters. All this will ſufficiently account for the ſubſiſtence of the people hitherto, notwithſtanding of the very defective crop 1799, and even will in ſome meaſure carry us on during the expenditure of crop 1800, itſelf greatly ſhort of an average, beſides having to ſupply, from its early conſumption, a conſiderable length of time which the former crop left unprovided for.

It has been already ſtated, p. 134, that the quantity of wheat converted into bread in a year of medium fertility, (in which I alſo underſtand that the nation affords its own ſupply of corn,) amounts to 7,500,000 quarters.

And of every other deſcription of grain, 4,115,376 qrs.

Total required for bread, 11,615,376 qrs.

But this is neither all ſent to market, nor is it all that the country produces; for, in the firſt place, there is included in it, all that the farmers themſelves and their whole body of labourers, (a very numerous claſs) require at home for their own ſubſiſtence, and which does not go to market at all; alſo the crop has other exigencies to provide for than merely bread-corn. There is indiſpenſibly required *ſeed* for the following crop; *corn to feed the horſes who labour the land*; corn to feed the horſes *in every other department*, and, what is perhaps more than any, *malt* for the brewery; for man cannot live by bread alone, no more than without it altogether. What all thoſe different departments may require, I ſhall now endeavour to eſtimate in detail, ſo far as I have *data* for the different caſes; alſo the groſs amount of the crop itſelf in a ſeaſon of medium fertility.

Firſt, however, with reſpect to the amount of the crop, —which I muſt eſtimate from probable conjecture only, for preciſe data is altogether wanting,—I ſhould ſuppoſe that wheat, rye, beans, and peaſe, (all corn with little huſk) will return per Engliſh acre 22½ buſhels; barley and oats, both coarſer grain, 28. It has already been ſtated, that 3,000,000 of acres are required to be in wheat, and 6,584,602 acres in grain of all other kind: Then ſuppoſe ¼ of theſe to be in rye, beans, or peaſe, equal to 1,646,150, hence 4,646,150 acres,

producing 22½ buſhels each, and the remainder 4,938,452,— producing 28 buſhels the acre.

Next, (and theſe particulars I ſtate as in a great meaſure conſiſtent with my knowledge,) for every acre under a crop of corn, there will be required 3½ buſhels for bread to the farmer and his labourers; for ſeed 4 buſhels, and for horſe-corn 2½ buſhels, making 10 buſhels in all, for what may be called *home conſumpt* on the farm, and this, whether the crop be good, bad, or indifferent.

This being premiſed, let us ſuppoſe a year of medium fertility, ſuch as 1798, the produce and expenditure, therefore, of the crop would be as under:

	Quarters.
4,646,150 Acres of wheat, rye, &c. at 22½ buſhels per acre, - -	13,067,297
4,938,452 do. of barley and oats, at 28 buſhels per acre, - - -	17,284,582
9,584,602 Acres of land in bread-corn producing in all - -	30,351,879

Diſpoſed of as under:

1ſt. for ſeed to the next crop,	4,792,301	
2d. bread to the people, } employed in	4,193,263	
3d. corn to the horſes, } huſbandry	2,995,184	
Deduct total home-conſumpt		11,980,748
Remains for market,		18,371,131

which is at the rate of 15. 333 buſhels from each acre.

It was before ſeen that the quantity required by the whole

	Quarters.
nation for bread, was,	11,615,378
Deduct what is required by the huſbandmen, as above,*	4,193,293
Remains for bread to the reſt of the community	7,422,113

* Under this deſcription is included, not merely the farmers and their permanent labourers, but alſo the occaſional work-people in hay time, harveſt, &c. A numerous body, and ſupported in theſe times on a very high rate of board.

ıe quantity ſent to market as before, viz.	18,371,131
ıe quantity as above required for bread,	7,422,113
s for the brewery, the diſtillery, ı, and corn for the horſes not em- d in huſbandry,	10,949,018

ſuppoſe a year of ſcarcity, ſuch as crop 1799, in the return was at leaſt *one-fourth* leſs than a medium ence the produce and diſpoſal of it will be as under:

	Buſhels.	*Quarters.*
50 acres of wheat, &c. at	16.175 per acre	9,800,597
152 do. of barley & oats at	21. do.	12,963,236
Total produce,		22,763,833
home-conſumpt as before,		11,980,748
ains for the market,		10,783,085

s at the rate of 9 buſhels the acre only.

ſuppoſe a ſeaſon of great fertility, ſuch as the ever able year 1779, when the crop was *one-fourth ABOVE* ım crop, and on which the farmers got all rich, al- they ſold their wheat at from 30s. to 40s. the quar- l every thing elſe equally low,—The produce and ex- re of ſuch a crop would be thus:

	B. pr. acre.	*Quarters.*
50 acres of wheat, &c. at	28.125.	16,334,121
52 do. barley and oats at	35.	21,605,727
Total produce,		37,939,848
home-conſumpt, as before,		11,980,748
ains for market,		25,959,100

s at the rate of 21.666 per acre.

:lude, although the preciſe quantities ſpecified in the of this eſtimate may be conſiderably different from fact, yet the principle on which it is conducted will unſhaken, particularly that which relates to the diſ- the crop, in which it is indiſpenſible that a preciſe r (not a proportion) of the grain produced, muſt be l in the cultivators own hands, without going to mar- l; and this quantity, bearing a great proportion to the

whole in a year of medium fertility, preponderates greatly againſt the market in a year of ſcarcity, and is only lightly felt in a ſeaſon of abundance, in which the huſbandman, having a vaſt *proportion* more of his crop to diſpoſe of, not only can afford to ſell it at a much leſs price, but actually gains more to himſelf. Thus, how much better muſt it have been for him to ſell 21¾ buſhels from the acre in 1779 at the then moderate prices, than to ſell 9 buſhels only from the defective crop 1799, with all the advance in the price; for, on comparing the price of any thing now, to what it was 20 years ago, regard ſhould always be had to this, that the *value of money* is fallen, and that in no mean degree, not going above one-half the length in purchaſing any one article almoſt, but particularly *labour* and *rent of land*, that it did only 20 years back; when, although, the peck of oatmeal was to be had from 9d. to 1s. the day-labourer had only from 9d. to 1s. a day to provide himſelf in every thing too; whereas his wages have now advanced to double theſe rates, and land to double the rent, not in conſequence of the preſent *dearth*, as ſome people have a viſionary notion; but, previous to the period when ſcarcity occaſioned it; viz. in 1797 and 1798, when the oatmeal was as low as 9d. the peck, and the quartern loaf at 7d. while the higheſt rented land at preſent in the country was then taken, at the bleſſed rent of 2 bolls of wheat, 2 bolls of barley, and half a boll of oats the acre, on a 40 years leaſe *. In fact, high prices of proviſions have a tendency to lower the price of labour, however unhappy a predicament it may be to the labourers themſelves, from the neceſſity they are under of application; and high rents have a tendency to lower the price of proviſions, from the neceſſity of exertion the huſbandman is put to, as well as from his inability to hoard. I know, indeed, that there is a very general notion to the contrary on both theſe points; but I believe alſo, that farmers and labourers, like to the reſt of all mankind, diſpoſe of their commodities or their talents, at all times, not for what they *can afford*, but juſt for what they *can get*. The workman, with ten helpleſs children to maintain, getting no more for his labour than he who has none, and the farmer who pays 10l. the acre of rent, getting no more for his corn than his neighbour, who only pays 10s.

Mid-Lothian, February 1801. *H.*

* Which, for crop 1800, amounts to about 13l. Sterling the Scots acre, or 8l. 8s. the Engliſh.

FOR THE FARMER'S MAGAZINE.

bſtract of the Syſtem of Agriculture purſued in his MAJESTY'S FARMS, *with Remarks continued from laſt Number, by a Correſpondent.*

I MEAN now to give an abſtract of the Syſtem of Agriculure purſued in what is called the *Flemiſh farm.* This farm onſiſts of four hundred acres of good loamy ſoil, one hunred and ſixty acres only of which are kept under the plough; he reſt being probably in perennial meadow, although the mployment of that large remainder is altogether omitted by Mr Kent. The arated part is divided into four portions of orty acres each, and is managed under a courſe or rotation f four years. Firſt year, wheat: Second year, cabbage or lover: Third year, oats: Fourth year, beans.

As in the account of the Norfolk farm, we are not informed which crop gets manure, nor whether the beans are own in drills and hoed, or ſown breadcaſt and left to weeds nd nature. The tops of the beans are taken off, juſt after he bloſſom ſets: This is an excellent practice, eſpecially in wet ſeaſons; and I have known it done in Berwickſhire, by neans of a ſcythe ſet in a ſtraight handle. Half of the wheat crop is ſown with clover, as a crop for the ſecond ear; the other half is winter and ſpring fallowed, and planted with cabbages.

The kind of cabbage cultivated, is the *drumhead.* The eed is ſown in Auguſt: The plants are ſet out in beds in November; and tranſplanted into the field in July. Mr Kent takes no notice either of the manner of planting, or the ulture they receive. It may not be amiſs to ſay, that, where abbages are propoſed to be cultivated in the field, they ought o be planted in regular rows, two and a half to three feet liſtance, ſo as to admit the horſe hoe; and that, like turnips, hey ſhould likewiſe be carefully hand-hoed. After this crop, ſhould conſider barley would thrive excellently, and would e more profitable than oats.

Although not perſonally converſant with the management of ſuch ſoil as compoſe this farm, which Mr Kent deſcribes n one part of his report as good loam, and in another as ſtrong and heavy, I ſhall venture to propoſe a very different plan of procedure, founded on my obſervation of the management of ſuperior agriculturiſts in Scotland, on ſuch lands.

Aboliſhing the perennial meadow, the whole four hundred acres ſhould be divided into ſixteen fields of twenty-five acres each: Suppoſing two of theſe taken up from graſs, as a portion or eighth part of the whole, the courſe or rotation would be as follows: Firſt year, oats: Second, a perfect fallow: Third, wheat: Fourth, beans in drills: Fifth, barley, ſown with mixed graſs ſeeds as formerly propoſed for the Norfolk farm: The three ſucceeding years in graſs, and ſo round again as before.

The fallow portion ought to have a complete dreſſing of lime, as directed for the Norfolk farm. Part of the portion allotted for beans in the above plan may be planted with cabbages; and part ſown with vetches, for the work horſes.

Not being informed what portion of the ſtock belonging to theſe farms are paſtured in the park, it is impoſſible to form any accurate eſtimate of their total produce annually. Leaving that circumſtance out of conſideration, for want of *data*, the following may be taken fairly as the probable produce from the two farms, under the propoſed plans for their cultivation.

Wheat,	4,400	Buſhels.
Barley,	6,200	
Beans,	1,800	
Oats,	12,000	
Total,	24,400	

Mr Kent eſtimates 3360 buſhels of wheat and rye, which latter is not taken into the propoſed ſyſtem; and 5000 buſhels of oats and beans. It is not neceſſary to mention the difference, being ſufficiently obvious.

Mr Kent mentions, that forty oxen are fatted off annually, and eight hundred ſheep bred I will engage on theſe farms to fatten off every winter from eighty to an hundred oxen, and five hundred ſheep; and to feed off every ſummer at leaſt five hundred lambs, and three hundred ewes. Upon the whole, ſo far as it is poſſible to eſtimate the value of land unſeen, had I a capital enough for ſo great an undertaking, I would not heſitate to give a rent of four thouſand guineas, for a thirty years leaſe of his Majeſty's two farms, including the privilege of paſturing ſheep and oxen and

ung horſes in the park, and ſuppoſing the farmer to have o pariſh or county rates to pay.

Mr Kent ſtrongly inſinuates the vaſt ſuperiority of oxen ver horſes, as farm work cattle. The compariſon contain- d in the fourth number of your Magazine, may ſuffice as a omplete refutation of that idea. Under the plan I have ropoſed, thirty pair of horſes would be neceſſary for he two farms: and, as the Northumberland Survey review- d in your laſt number, clearly ſhews that a team of ſix oxen oſts at leaſt 8l. annually more than a pair of horſes, thirty uch teams of oxen would occaſion a loſs of 240l. It is alſo hown, that ſuch an ox-team requires ten acres more for its aintenance, than a pair of horſes; by which it is plain that hirty ſuch teams would occaſion the waſte nearly of three undred acres of land.

I muſt, however, remark, that the eſtimate given in the Northumberland Survey, is by far too low rated. The real oſs on ſuch an ox-team cannot be leſs than 25l. or 30l., con- equently on ſuch an extenſive farm as the King's, the an- ual loſs would amount to a prodigious ſum, independent of he land waſted in ſupporting the animals.

I make no remark on the folding of ſheep, which is large- y practiſed in the king's farms, becauſe I do not pretend to ny accurate knowledge of folding; though, ſo far as I have ad acceſs to learn concerning it, I am very far from approv- ng the practice.

There certainly can only be one opinion reſpecting the hort notice given by Mr Kent, reſpecting the King's mill or ſupplying the labourers with bread meal at firſt coſt. It s highly benevolent, and is moſt judicious charity: Let all landlords, inſtead of compelling their unleaſed tenantry to ſell below market-price, which is downright tyranny, go and do likewiſe.

I have ſeen a farther report from Mr Kent, reſpecting the King's flock of fine-woolled Spaniſh ſheep; which he has gra- cioufly directed to be ſold at moderate prices, to thoſe who are willing to try the breed. I am ſorry that, not having this by me, I am unable to give you any particulars of that patriotic arrangement.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Receipts for deſtroying the Gooſeberry Caterpillar.

GENTLEMEN,

In compliance with the requeſt of your Aberdeenſhire correſpondent W. C. I ſend you the following receipt for deſtroying the gooſeberry-caterpillar.

Take one Scots pint (two Engliſh quarts) of tobacco liquor, and mix it with an ounce of alumn; when this is diſſolved, dip a bruſh in the liquor, and, as ſoon as the caterpillar begins to appear, hold up the branches ſo as to expoſe the under ſide of the leaves, and draw your hand gently over the hairs of the bruſh, by which a ſmall ſhower of the liquor will be thrown upon the back of the leaves, where the caterpillars generally reſt, which will effectually deſtroy the eggs, and the caterpillars will die in a few minutes.

N. B. The above receipt obtained a premium of Ten Guineas from the Highland Society, *after due examination*; for this reaſon alone I have ſent it you: It is recorded in the firſt Vol. of their tranſactions, and is introduced with much irony by the Editors of the London Monthly Magazine, by way of extract, in the midſt of their *philoſophical intelligence.*

The following contrivance of Colonel Johnes of Hafod in Cardiganſhire, has, I am informed, been ſucceſsfully practiſed by his gardener in deſtroying the gooſeberry-caterpillar. Quick lime being carefully ſtrewed under the buſh, it is then covered cloſe by a cone made of coarſe painted tarpalin, extended upon three or four wooden hoops; a common fumigating bellows, containing tobacco and ſulphur in equal quantities, is introduced through a hole at the bottom of the cone, when a few moments are ſufficient to ſuffocate all the caterpillars, who are completely deſtroyed by falling on the hot lime. It will be neceſſary to caution your correſpondent, not to let the buſh remain too long under the fumigation, as I once ſaw a gooſeberry tree killed entirely by remaining too long in the fumes of ſulphur.

In addition to the valuable communication of your correſpondent A. S. on the *ſtoring of winter apples*, I beg leave to ſubjoin the following remark: viz. That in the ſouth, fern is reckoned preferable to ſtraw for packing, as it never gives the apples a muſty taſte, which ſtraw is very apt to do.

P. H.

O THE CONDUCTORS OF THE FARMER'S MAGAZINE.

NTLEMEN,

VERAL of your correſpondents have ably treated the im-
nt queſtion of the advantages and diſadvantages of *fal-*
. It is evident, however, that they are marſhalled in
parties, the one probably made up from *clay land far-*
, or thoſe who have contracted clay land notions; and the
r the reverſe,—So as not to diſcuſs the point with impar-
y; it ſeems to me to be neceſſary to put the queſtion
rently from what they have done; as thus, Whether
ws are upon certain ſoils a neceſſary part of the
rſe, or if only incidental, that paſſing years may or may
require. My notions upon the caſe thus ſtated, are, That
ll ſoils by their own nature demand a continued conſtancy
rop, (in which the public and private intereſts concurring)
rotation of every farm ought to be governed by that ſa-
ne law, and no more have a fallow in proſpect than a year
bſolute ſterility, which, were they general over the king-
, would really be the caſe. This is one point decidedly
inſt the clay land farmer, who conſiders a fallow unavoida-
in a given time, and on that account is more patiently to-
nt than becomes him, of the gradual propagation of weeds.
That the neceſſity of this practice may be warded of for
ngth of years, is evident to me from the number of expe-
nts found in the new huſbandry which may be ſubſtituted
s ſtead; winter and ſpring tares are off the ground in
d time, to admit of a baſtard fallow preparatory to that
's wheat. Spring and ſummer cabbages ſucceed, oats
ow, and drilled beans, concluded by barley, graſs ſeeds,
and paſture.

No practice, however, tends more powerfully to the extir-
ng of fallow, and the weeds which gives its riſe, than the
ling of all white corns without exception, which, if exe-
ed at wide intervals, to admit the horſe-hoeing plough, and
t plough effectually uſed to moulder, clean, and earth up the
p, would prove an abſolute panaceæ to the evils attending
clay lands. No ſeaſon, however rude, could batter their
face in oppoſition to the crumbling of its work, no weed
ear but to be ploughed down, and the feeding of the roots
uld infallibly load the ground with an unuſually burden-
e crop.

All, therefore, I am diſpoſed to yield to Mr Clayland, this; that as the ſoil is pregnant with evil as well as good bare fallow cannot be blotted out of the farmer's callendar, an extraordinary part of the regimen of the farm. While ſlovenly farmers exiſt, and untoward ſeaſons come to pa and worſe than all, while removing tenants, by a fooli ſcourging, bring upon their ſucceſſors this foul diſeaſe: God's name, then, purge and ſalivate, by the mercurial cour of fallow, but do not adopt it as a part of the ordinary bill o fare, neceſſary at a ſtated revolution to the vigour and fert lity of the farm *.

SCOTUS.

Berwickſhire, }
Nov. 1801. }

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Thoughts on various branches of Rural Economy.

GENTLEMEN, *February 4th*, 1801.

IN the Yorkſhire Quarterly Report, dated the 7th ult. your correſpondent gives you the following information; "The fallows for turnips have, as uſual, received their firſt ploughing; what are called ſummer fallows, are here gener ally deferred till after ſpring ſeed-time, when the ſtrong ſoils turn up dry and broken:" Whether or not this be good huſbandry in the main, I leave to better judges.—To know the proper time to plough fallows, is certainly of much conſequence. In this part of the kingdom, there are ſeveral advocates for the times mentioned above, while others (I think the greateſt number) prefer November and December for all deſcriptions of fallow. As I do not recollect having ſeen much in your uſeful miſcellany upon this ſubject, I ſhall be glad to have your opinion, or that of ſome of your readers of experience. For my own part, I have frequently obſerved, that if ſtrong fallows do not receive their

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* Though we have, from motives of impartiality, given a place to the above letter, yet we are bound in duty to ſtate, that the ſentiments of the author are decidedly contradicted by the reſult of every trial we have made to aſcertain whether ſummer fallow could be diſpenſed with upon heavy ſoils. If a proper rotation of crops is adopted, we dont queſtion but that the neceſſity of bare fallow may be leſſened. To lay it aſide altogether upon clay ſoils would however be attended with the greateſt miſchief. N.

ıghing till April or May, and if the ſucceeding ſum-
s not bring a good deal of rain, they can but ſeldom,
a conſiderable additional expence, be ſufficiently re-
ıefore ſeed time; and that, if they are ploughed in No-
or December, the rains, ſnow, and froſt, make them
:e eaſily, provided the ſecond ploughing is given in
ollowing. The third, I think, ſhould be given in
ır early in July. When the firſt is not given till
:ither they do not receive ploughings enough, or gelt
: too ſhort an interval, and when the utmoſt is done
: time will allow, ſtill the land is generally too cloddy.
opinion, (but I give it with diffidence, and a wiſh to
ured with that of others more able to judge), clods are
ıs in ſeveral reſpects. They cannot be ſufficiently
d by the manure and fallowing, and frequently contain
boſoms the roots and ſeeds of pernicious weeds, be-
eventing the ſeed from being laid at a proper depth;
iis ſhould be depends, probably, on that of the ſoil,
: nature of the ſub-ſoil; but it appears to me to re-
:onſiderable attention. Wheat appears to have two
he one is called the ſeminal, and the other, the coronal
The *firſt*, I have heard, grows with the germ in au-
ınd, with the farina, ſupports the plant till the ſpring;
h time the coronal root forms juſt within the ſurface,
ts out ſtalks, upon the number and ſtrength of which
ıdneſs of the crop will principally depend. They will,
:r, not be ſufficient, if the ſeed and ſeminal root are
:p enough to be ſecured againſt the inclemency of the
r in winter, and if the ſoil is not pulverized ſo as to
he tender fibres a free paſſage in ſearch of food. Part
food is, I conceive, (eſpecially where the land has been
:d with judgment) received from the air, rains and
more beneficially, by ſoils which have been ploughed
winter, and which are well pulverized, than by thoſe
are bound in large clods. Some farmers aſſert, that
:quently advantageous to have a good many clods upon
wheat, eſpecially when the land has not been long in
or is not ſtrong. I am not an advocate for having land
ı tillage, nor for having any, but very ſtrong land,
r-fallowed; neither am I convinced, that it is neceſ-
ı every kind of ſeaſon, and in every caſe, to ſummer-
even land of this deſcription. But I am decidedly of
ı, that to ſummer-fallow turnip ſoils, is extremely in-
to the occupier and to the community. Good loams,

light ſoils, and ſuch as have but a very ſmall mixture of cl
and are dry, will, if kept freſh by an alternation of till
and graſs, produce turnips worth three to ſix pounds an ac
and more wheat, barley, and oats after them, than if kept
the ſummer in naked fallow. They will alſo grow clo
and graſs better. This management, therefore, brings fo
for a much larger ſtock, which, by encreaſing the quantity
manure, will at the ſame time encreaſe the ſucceeding cro
Throughout it clearly ſhews, that the farmer, who purſues
has rationally built his hopes of encreaſing the quantity of h
moſt fertilizing article, on a ſolid foundation. In many pa
of this kingdom, as well as in Yorkſhire, too much land
I apprehend, ſummer-fallowed, which, from the nature of
ſoil, is capable of growing great crops of turnips. For thi
the farmers are ſometimes culpable, but, in general, I b
lieve, it is owing to another cauſe; namely, reſtrictive c
venants, inſerted by agents who draw the agreement by form
approved in the early days of their great grandfathers. I a
very far from imputing to theſe gentlemen any wilful devi
tion from what they know to be right. God knows, the e
timate I have found of their ſapience and agricultural abi
ties, acquits them of that charge. But, as the cultivation
the earth involves the moſt important intereſts of ſociety,
muſt ſincerely hope, that land-owners, finding that mo
more is neceſſary than merely to be able to write and ke
an account, will ſoon attend moſt particularly to the qualifi
cations of their agents. In conſequence of the covenants
have pointed out, the graſs land has been kept in graſs, an
the tillage land in tillage, from generation to generation. I
this caſe, turnips cannot be expected, however favourable th
ſoil may naturally be. Perhaps, to break up all thoſe pa
tures which are fit for grazing large cattle, would, in ſom
parts of the country, be wrong; but all other paſtures ſhoul
give way to the plough. Much more *corn*, *beef*, and *mutt*
would then be brought to market, and a proſpect opened
being able to raiſe food enough for our own conſumptio
To rely, for part of this, upon foreigners, whoſe policy ma
ſometimes induce them to ſtarve us, is hurtful and dangerou
in the extreme: It is diſgraceful, if we can ſupply ourſelve
Whether we can, or not, is uncertain; but I am inclined t
entertain an opinion, that we can. If the beſt ſyſtem of hu
bandry and good management were adopted in every part o
Great Britain and Ireland; if a general Incloſure Bill, to fac
litate the improvement of common and waſte lands, was paſ

ınd if the farmers, in many parts of England, would lef-
ıeir conſumption, by yoking only two inſtead of four or
ıorſes in their ploughs and carts, an additional quantity
od might, I think, be brought to market, much greater
that we have imported on an average of the laſt ſeven
, and fully equal to the ſupply of our encreaſed popula-

It was laſt year ſtated in the Houſe of Lords, that,
r proper management, Great Britain and Ireland might
raiſe food ſufficient for the conſumption of twenty mil-
of inhabitants. How much this exceeds the preſent po-
ıion, I cannot ſay; but if it is an increaſe of no more
four to five millions, I am induced to ſupport the opinion
ıe Noble Lord who made the ſtatement. A full popula-
fed by the produce of domeſtic agriculture, would bring
tceſſion of real power, and lay a ſtill broader foundation
ın increaſe of wealth. What I have ſtated, as to ſupply-
ourſelves, will not, I hope, appear improbable, when it is
idered, that the average I have mentioned, of wheat and
r, is not more than about 500,000 quarters, and that, in
period I have taken, we have had three unfavourable
ns, and two in ſucceſſion, worſe than any other in the
ıory of any man living: The crops were conſequently
h below the average-produce, not only in this country,
alſo abroad, and this, I believe, is the ſole cauſe of
preſent high prices of grain. War, monopoly, and
ſalling, had pretty much the ſame chance to pre-
a few years ago, that they have now, yet corn was then
moderate, or a low price, becauſe it was plentiful, and
tiful becauſe the ſeaſons were favourable. Notwithſtand-
the great number of men employed in the army and na-
there has been no want of hands in agriculture. Now,
ur gallant defenders belong to us in peace as well in
, and although they may conſume more animal food in
one caſe than when differently employed in the other,
ich by the bye leaves more vegetable food for the lower
es) as I cannot conceive that they *eat* any more, *upon the*
le, I do not believe that the war has raiſed the price of
ı. The waſte ſo much ſpoke of, is, perhaps, more than
nterbalanced by the great number of proviſion ſhips which
ſuperiority of our navy enables us to bring into our ports,
ch would otherwiſe go to thoſe of our enemies, and which,
ime of peace, we would have no right to capture. The
e to which the unequalled exploits of our navy has redu-
the ſhipping, merchants, and credit of our enemies, has no

doubt enabled us to appear in the great corn markets abr
againſt a more feeble competition than would have appea
in time of peace, which may counteract the additional fre
and inſurance. With regard to what has been ſo gener
and ſo loudly ſaid, as to the circulating medium, taxes,
having increaſed the difficulties of the lower orders, I
leave to refuſe my aſſent to the poſition. Dr Adam Sm
has informed us, that grain was not ſo high in the laſt cen
ry (upon the average) as in that immediately preced
Now, if this be true, and if we, at the ſame time, give cr
to what that great man ſays, as to an increaſe in the pric
labour having taken place in the laſt century, and to the
ditional price of ſoap, candles, ſalt, and leather, being co
terbalanced by the additional quantities and lower price
potatoes, turnips, cabbages, and coarſe cloth, how can i
made appear, that the condition of the people in queſtion
become worſe? A few facts are worth a thouſand argum
and I believe it can be made appear, from well authentic
records, that the average-price of corn was higher, and
of labour much lower, in the ſeventeenth, than in the
century; and that in the former, ſcarcity occurred, in co
quence of unfavourable ſeaſons, in which the lower r
were in a much more deplorable ſtate, than that to which,
the ſame cauſe, they are now unfortunately reduced. T
who view the increaſe of wages with ſuch gloomy appre
ſions, I beg leave to refer to what the celebrated autho
the Wealth of Nations ſays upon the ſubject: 'The li
reward of labour, therefore, as it is the effect of incre
wealth, is alſo the cauſe of increaſing population. To
plain of it, is to lament over the neceſſary effect and
of the greateſt public proſperity.' I am no friend to
but I am a friend to my country, and, in times of ſuch
ger and perturbation as the preſent, conſider every thing
tends to raiſe diſcontent, by inducing the people to b
the war to be the cauſe of their preſent diſtreſs, as highl
trimental to the deareſt intereſts of this kingdom, and fa
able to the views of our enemies. If next ſeed time be
vourable as that with which we were bleſſed laſt autum
hope we will ſoon have a bright proſpect of plenty. In
I have no doubt of the next crop being ſo great, if the
ſons are favourable, that, notwithſtanding war, the circul
medium, monopoly, large farms, and the many inept re
which are always found out after adverſe ſeaſons and de
grain will, next winter, be at a moderate, or a low price

e the proſpect more likely to continue, let us ſupport, n all parts of the country, what the city of London has poſed, and petition the Legiſlature for a general *encloſure-* and a *commutation of tithes.* Such petitions will en- rage, and completely ſtrengthen, thoſe who might other- ſhrink from the taſk. If theſe meaſures are not car- ſoon, they will again be abandoned. A plentiful crop obliterate the impreſſions which have been made as to and future ſcarcity: Let thoſe who think otherwiſe, be inded of the clamour that was raiſed, and the encloſure- and improvements which were propoſed in 1796, and of torpid ſtate into which the plenty of 1797-8 ſunk the ad- ates of thoſe meaſures. We heard but little more of them ſcarcity returned. I am, very ſincerely,

Gentlemen,

A well-wiſher to your Magazine,

A NORTHUMBERLAND FARMER.

P. S. IF any of your correſpondents are ſtill of opinion, the iſſue of paper, ſince the commencement of the Ame- n war, has raiſed corn to a high price, I muſt beg of m to conſider, that even ſince that period, it has been at a y moderate, or a low price, except when unfavourable ons cauſed a great deficiency in the produce; and that in 97, oats could hardly be got off in the ſpring and ſummer, 1s. 5d. to 1s. 8d. per Wincheſter buſhel. If the price, hin the laſt year, has riſen above the ratio of the deficien- it ſhould not, in my opinion, be imputed to the deprecia- n of money, by the iſſue of bank-notes, but to what will ſt undoubtedly happen in every country where there is a icient quantity of money, either in paper or in ſpecie, ere the Legiſlature is wiſe enough to ſupport freedom of de, and where a deficiency is ſeen or apprehended, in any icle, more eſpecially one of the firſt neceſſity, *to the com- tion to poſſeſs it.* This competition is perfectly juſt and ſonable, and I fully agree with the Reverend Mr Findlater, thinking the increaſe of price occaſioned by it, an advan- e to the public, inasmuch as it tends to leſſen the waſte d conſumption, and to prevent dearth from ending in fa- ne. The high price at preſent, however, is not ſo much ve the ratio of the deficiency in the quantity left for the rket as, at firſt ſight, appears. For, as you have very lly obſerved in your laſt number, the conſumption by

farmers for ſeed, ſervants and horſes, &c. being the ſame in a ſcarce as in a plentiful year, a crop *one fourth* deficient, produces little more than *one half* of the uſual ſupply to be carried to market.

With reſpect to the circulating medium, I think ſome erroneous opinions are entertained. As long as our bank notes not only paſs without diſcount, but are preferred to gold and ſilver, they will not depreciate the value of theſe metals, and raiſe the price of the neceſſaries of life. A currency to a certain amount in ſpecie, in paper, or in both, is neceſſary for the trade of every country, and beyond that amount neither the one nor the other will circulate. When paper money, therefore, is iſſued, it removes an equal ſum in ſpecie, and creates an additional capital for foreign trade, no branch of which, as far as I underſtand, requires it more in the precious metals, than that in grain, ſo that, very probably, that circulating medium, the iſſuing of which has been ſo much condemned, has contributed, moſt eſſentially, to the formation of that large and hard capital, ſo neceſſary in purchaſing that very article, which of all others it has been ſuppoſed to have increaſed the price of, and which we could not have imported in ſuch large quantities without it. The ideas I have conveyed as to paper money, not depreciating the value of gold and ſilver, are, I conceive, ſupported by ſeveral authors, eſpecially by Dr A. Smith, in his Wealth of Nations, at pages 437 and 490, Vol. I., and alſo by bankers and merchants of great experience.

A N—d F.

The information deſired, (in the letter inſerted in your laſt number, ſigned W. C. Aberdeenſhire,) relative to lime, is much wanted in many parts of the country; and I hope you, or ſome of your able correſpondents, will ſoon give it in your Magazine.

A N—d F.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On the effect of Tithes.

GENTLEMEN,

YOUR correſpondent N. B. p. 18, does not read me fair, when he makes me ſtate the exaction of tithe as being the cauſe of low rents in England: I have ſaid only, that it is

the *chief cauſe*, not the *ſole cauſe*, as he infers. *Want of leaſes*, alſo, operate the ſame way, and ſo muſt alſo *want of economy in labour*, (example 5, 6, or 8 cattle in a plough, where 2 might ſerve); but theſe two laſt forbidding circumſtances, operate merely in proportion as improvement is prevented by the one, and expence occaſioned by the other; but tithe operates in a double capacity towards the reduction of rent, *firſt*, in ſo far as its intrinſic deducted value amounts to; and, *ſecondly*, by as much as the huſbandman muſt be reimburſed for the trouble it occaſions him, and which, although an indirect, is to him a very certain ſource of emolument.

I muſt ſtill inſiſt, that the drawing of tithe can be no rational excuſe for not improving lands in England, as the great body of land there, ſuſceptible of melioration, is ſuch as would repay the extra expence, tithe included, during the very time the improvement was going on. What extra expence, for example, would be incurred, in converting the old rogged paſtures of England into corn fields, that would not be defrayed the very firſt year?

It may indeed appear wonderful, that the farmers ſhould make ſuch an outcry againſt tithe, when it really is advantageous to them; but it is only one ſubject of wonder added to another, that we have here to remark. Both proprietors and clergy ſeem to ſupport them, while N. B. inſiſts, as well as myſelf, that they are againſt the intereſts of either. But, after all, *ſteady oppoſition* to the abolition of tithes, is not to be inferred on their part, becauſe they have not yet entered heartily into ſchemes for commuting them.

The queſtion I put, Whether tithe free-lands are generally better cultivated than thoſe liable in tithe, remains ſtill unanſwered, and is indeed unanſwerable, but by the production of preciſe evidence. If tithe were, as aſſerted, to be ſo very diſcouraging to cultivation, it muſt appear an aſtoniſhing circumſtance indeed, that the effect, nevertheleſs, cannot be perceived in any particular caſe.

March 1801. A SCOTCH FARMER.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On the Smut on Wheat.

GENTLEMEN,

I take the liberty of ſending for inſertion in your Magazine, ſome experiments and obſervations made ſeveral years

ago on the ſubject of the *ſmut* in wheat, and communicated to the Board of Agriculture.

In the autumn of 1796, I collected a quantity of ſmutted ears from a field of wheat in which they were very numerous, and a number of healthy well filled ears from another field in which there was no ſmut. The grains were rubbed out of both, intimately mixed and kept in a box for two months, at the end of which they were taken out and rubbed between the hands, in ſuch a manner as to break the whole of the ſmut balls; the parcel was then equally divided into two parts, one of which was three or four times waſhed with pure water, well rubbed between the hands at each waſhing, and afterwards ſown in a drill in my garden; the other half was ſown in another drill in the ſame ground without any waſhing or other preparation, the ſoil, and every other circumſtance of manure, light, heat, air, and moiſture, being equal.

Both parcels vegetated at the ſame time; and for about two months thereafter, there was no viſible difference in their appearance: But at that period, I obſerved many of the plants in the drill that had not been waſhed, were of a darker colour than the others, theſe, when narrowly examined, were of a dirty green. The plants in the drill that had been waſhed, were all of one colour, and ſeemingly healthy; as the ſeaſon advanced, the difference in colour became more ſtriking, and continued to increaſe, till the grain was fairly out of the blade, when many of the dirty green ears began to exhibit ſymptoms of decay.

As ſoon as the ear was completely ſhot out, the whole of thoſe in the unwaſhed drill that had the dirty green appearance above deſcribed, were found to contain nothing but ſmut, and theſe ſmutted ears were in the proportion of more than ſix to one of the healthy ones; while, on the contrary, the drill in which the waſhed grains were ſown, and which contained ſeveral hundreds, had ſcarce one ſmutted, or unhealthy ear in it. The ſame experiment was repeated the following ſeaſon with nearly the ſame reſult. Satisfied that waſhing with pure water alone, would be found a remedy for the diſeaſe, I made no farther inquiry upon the ſubject till the following autumn, when, having ſome very good glaſſes in my poſſeſſion, I examined a good many ſmutted ears, more, I confeſs as a matter of amuſement, than from an expectation of diſcovering any thing that might throw light upon the ſubject: Upon a near inſpection with the glaſs, I found that the dirty

reen colour of the blades of the ſmutted ears, was owing to number of ſpots infinitely ſmall, reſembling the excrement f an inſect; my obſervations were continued during the hole period of filling and ripening, in the courſe of which I ade no additional diſcovery, except obſerving that the leaves nd ſtalks of the ſmutted ears, decayed ſooner than ſuch as ere healthy.

About the end of autumn, having one day brought home ome ſmutted ears, of rather an unuſual appearance, I examined them very narrowly, and diſcovered that the balls ere perforated in many places with ſmall round holes, a hing I had not before obſerved in any that I had met with: his I aſcribed to vermin, and, upon ſticking one of the grains pon a pin, and placing it under the glaſs in a very bright un, I ſaw diſtinctly ſeveral ſmall tranſparent ſpecks upon the beard or downy part of it: I examined ſeveral more, and met with the ſame appearance; but being called haſtily away upon buſineſs, I was under the neceſſity of leaving them upon the table, without being able to aſcertain whether the objects I had ſeen were eggs or inſects. In the evening when I came home, I renewed the inveſtigation by candle light, in the courſe of which, I was under the neceſſity of holding them very near the candle, the heat of which ſoon relieved me from my embarraſſment, by putting them in motion, and ſhewing me that the ſpecks above mentioned were real inſects, nearly reſembling wood-lice in hape.

Next day, I repeated the trials by ſun light, with new mut balls, and diſcovered the ſame appearances, but without eing able to make any of the inſects ſtir: Diſappointed at ot ſeeing them in motion with ſun light, and recollecting the eat of the candle, I threw the concentrated rays of the ſun pon them with a burning glaſs, which completely anſwered ny purpoſe, by putting them in motion, and ſhewing them n every different point of view. To deſcribe, with any thing ike accuracy, an inſect ſo ſmall as not to be diſtinguiſhable by the naked eye, would be an almoſt impoſſible taſk; it is ufficient only to ſay, that its general appearance is very ſimilar to that of the wood-louſe.

I ſlightly tinged ſome of the grains, upon which I obſerved theſe inſects, with the common ſalt and urine pickles; both of which proved almoſt immediately fatal to them; for though they ſtill adhered to the grains, I was not able, at the diſtance of five minutes after the pickles were applied, to

diſcover the leaſt appearance of life in any of them. I have troubled you with this communication, hoping that ſome of your intelligent correſpondents will be able to inveſtigate the ſubject more completely, and anſwer, in a ſatisfactory manner, the following queries.

1ſt. Does this inſect occaſion the ſmut? or does it faſten upon the plant in conſequence of its being in a ſickly ſtate?

2d. If the diſeaſe is occaſioned by the inſect, would it be prevented by a greater degree of attention to cleanlineſs in barns, ſuch as ſweeping the walls, roof, &c. waſhing them once a year or oftener with quick-lime, &c. and burning the *chaff*, *duſt*, &c. in place of throwing it to the dunghill, as is commonly done?

3d. Would kiln-drying to a certain degree prove a remedy for the diſeaſe?

4th. Is the ſmut, with which barley and oats are affected, owing to the ſame cauſe?

5th. Does waſhing or pickling prevent the diſeaſe in theſe grains?

A. Z.

FOR THE FARMER'S MAGAZINE.

Sketch of a Tour through the Northern parts of Scotland.

PART II.

Few counties have been more improved within our memory than *Angus*, eſpecially thoſe parts where the land is moſt ſuſceptible of cultivation by the plough; but a great deal remains to be done, eſpecially upon the inferior ſoils. The ſpirit with which huſbandry is now practiſed, affords however juſt cauſe to believe that every inch of that diſtrict will in a little time be applied to beneficial purpoſes; to which no ſyſtem can ſo effectually contribute, as the graſs and turnip huſbandry—branches of rural economy, as formerly mentioned, much attended to by the enlightened and enterpriſing Angus farmers.

From Forfar to Brechin, 12 miles—The ſoil, upon the whole, rather of indifferent quality, but calculated for ſuch management as we have deſcribed.—We ſaw a few patches of turnips, none of them good. About Brechin, the ſoil is

of more value; and the plantations and policy around the caſtle, are laid out with conſiderable taſte and judgment. BRECHIN is a royal burgh of great antiquity; and the Cathedral, though it cannot ſtand a compariſon with many buildings of this kind, found in the ſouthern parts of the iſland, yet furniſhes proofs that the inhabitants of Scotland, according to their abilities, were not behind their Engliſh brethren in works of this kind. The noble family of *Panmure* is much reſpected in the neighbourhood. With them wealth is employed in the exerciſe of benevolence, but never is influence exerted for the purpoſe of oppreſſion. In fact, the true character of the higher ranks, is only to be learned among thoſe placed below them. The natural diſpoſition, in this caſe, operates without reſtraint, preſenting a real picture of the mind unfettered by thoſe obligations which regulate its actions in the company of equals or ſuperiors.

Our next ſtage was to MONTROSE, diſtance 10 miles. The ſoil very variable, but generally kept under the plough. About Montroſe it is of a light ſandy nature, unable to ſtand fatigue, moſtly in bad order, and the crop ſuffering ſeverely by the exceſſive drought, which appears to operate uniformly in direct proportion to the foulneſs of the different fields. Have not ſeen any wheat ſince we left the neighbourhood of Dundee; indeed, not much of the ſoil is calculated for that grain, except its loams or carſes ſituated upon the banks of the ſouth Eſk, or other rivers. Montroſe is a town of conſiderable trade, and the inhabitants are of a true mercantile ſpirit—Many of the houſes are built in the Flanderkin faſhion, with their gables to the ſtreet, which gives the place an uncommon appearance. The wooden bridge over the Baſon, is a curious piece of workmanſhip, does great honour to the architect, and, before its erection, the people, both in town and country, were neceſſarily ſubjected to many inconveniences.

From Montroſe to Bervie, 13 miles—Some wheat fields upon the road, and a good many carrying other grains of tolerable appearance.—At *Benholm*, the ſoil is of an excellent quality, and managed in a ſuperior ſtile. At Kirkſide, in St. Cyrus pariſh, we obſerved *half a ſtack of wheat* in the yard, which is the firſt we have obſerved ſince our departure from Edinburgh.

Before quitting Angus, it may not be improper to ſay a few words upon the great care beſtowed on the public roads, a circumſtance calculated to ſtrike the attention of every

traveller, whoſe comfort is thereby eminently promoted. From being lately laid out, the defective principles, adopted when the turnpike ſyſtem was firſt introduced, are completely avoided. To keep the old line, or to preſerve the line ſtreight, was apparently the only object of our old road ſurveyors. To ſhun a ſteep pull, was entirely overlooked by them, though it is obvious, that. by turning a hill, the road is often ſhortened, independent of the fatigue and danger ſaved, from not aſcending and deſcending a precipice. Excellent bridges are alſo built over the different rivers. In a word, for ſedulous attention to thoſe objects of police, the gentlemen of this country are entitled to the thanks of every traveller.

We now entered the county of *Kincardine*, or the *Mearns*, as it is commonly called, which ſtretches along the coaſt from the north Eſk river, to the bay of Aberdeen. The ſouth ſide of the diſtrict is diverſified with hill and dale, but the northern parts are very mountainous—A fine ſtrip of land runs along the coaſt as far as Stonehaven, which is adapted to the growth of wheat and beans; the climate in this tract may be conſidered as favourable to vegetation, and to every operation of huſbandry.

Bervie is a ſmall place, which obtained the honour of being made a royal Burgh, from the circumſtance of king David Bruce having landed there in one of his foreign voyages. The land around the town is of excellent quality, and the ſeveral crops were above mediocrity. North from Bervie, the country is in a great meaſure uncultivated, but where any conſiderable attention was paid, both graſs and corn ſeemed pretty good. Moſt of the road is high and unequal, but in the new line marking out, theſe inconveniences are carefully avoided. Mr L—— at U——s upon the Dunnottar eſtate, had fine wheat and graſs; indeed, all his operations appeared to be carried on with uncommon attention, agreeable to the moſt approved rules. As we approached Stonehaven, we ſaw a number of fine fields under decent management.

Stonehaven, though not a royal Burgh, is the chief town of the county. A ſail-cloth manufactory is eſtabliſhed there; the place is well built, and a tolerable trade is carried on from its port; a conſiderable quantity of lime ſhells for the uſe of the neighbouring farmers are imported.

To Aberdeen, 15 miles.—After paſſing Mr Barclay of Ury's improvements, the greateſt part of the land in the Mearns diſtrict is of the worſt quality, being little ſuperior to peat

urth; indeed, the making of peats ſeems to be the chief mployment of the people, and the ſeaſon being highly fa-ourable for that work, immenſe quantities have been made, nd were making, for the ſupply of Aberdeen and other parts. t one moſs, we ſaw the largeſt peat manufactory in the ingdom, the trade was very briſk, for carts were buſy driv-ng the commodity in every quarter.

Croſſing the bridge of Dee, we entered Aberdeenſhire, nd found the quality of the ſoil immediately bettered. The and from the bridge to the entrance of Aberdeen, is cultivat-d like a garden, and ſo early is the climate, that the bear rop was nearly all ready for the ſickle upon the firſt day of Auguſt. Turnips, in Angus and Mearns, are all raiſed in drills; but in Aberdeenſhire, the broadcaſt method is faſhion-able, which, though more favourable to the braid, is certain-ly accompanied with many diſadvantages in the after man-agement.

The bridge of Dee, which is ſituated upon the river, a-bout 2 miles above its mouth, was originally built in 1530, by biſhop Gavin Dunbar; and was re-built in 1720, by the Magiſtrates and Council of Aberdeen. It is at this day one of the neateſt in Scotland; the tide flows this length up the river, though navigable no farther than the town. Plenty of ſalmon and trout are catched in the river, which ſometimes riſes to a great height.

ABERDEEN is the metropolis of the northern diviſion of Scotland, and poſſeſſes conſiderable trade. It is in general well built, and, when the improvements for which an act of Parliament was lately obtained, are fully executed, it will vie in elegance with moſt towns in Britain. The inhabitants are remarkable for ſedulous attention to buſineſs, which is evi-dent to every ſtranger who walks the ſtreets. They mind the particular object about which they are engaged, without troubling themſelves with the concerns of other people. The harbour has of late been greatly improved, according to the advice and direction of Mr Smeaton. Above 18,000l. was expended in the erection of a new pier, and in making other improvements upon the river, ſolely at the expence of the city, without any public aid or contribution whatever.

A variety of manufactures are carried on at Aberdeen, but the ſtaple trade of the city and neighbourhood, has long been conſidered to be the *knitting of worſted ſtockings*; and here by the bye, may be ſtated the ſubſtance of a converſa-tion with Mr ——, factor to a great landed proprietor in the

country, wherein the merits of this buſineſs were a little connected.

We ſupped with the gentleman above alluded to, who, we found, poſſeſſed conſiderable information, and was endowed with all that acuteneſs for which his countrymen are celebrated. Talking about the number of tenants upon the eſtate under his management, it was remarked, that if the number was much curtailed, the property would ſtand a better chance of being improved, while the trouble of ſettling accounts and arranging matters with the tenantry, would be greatly leſſened. He agreed with the laſt remark, but urged his doubts whether ſo much rent could be paid by large tenants, as by ſmall ones, ſeeing that it did not generally ariſe from the produce of the ground, *but from the profits made by knitting of ſtockings.* This gave us a fair opportunity to maintain, that, under ſuch a caſe, he was reaping where he did not ſow; for if the land could not pay the rent, it was not fair to draw it from another trade wherein he was not directly nor indirectly concerned; and more than this, that, by ſetting land to ſuch people who made the cultivation of it only a bye buſineſs, he retarded the improvement of the country.—We forbear adding more relative to the converſation, further than that we ſpent the evening in an agreeable manner, and received much information concerning the rural economy of Aberdenſhire.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

In your review of the General View of the Agriculture of the Weſt Riding of Yorkſhire, p. 295 of your 3d No. you obſerve, "on Lime the theory laid down is perfectly conſiſtent with the reſult of the beſt conducted experiments in that important ſubject, particularly thoſe of Anderſon, Dundonald, and Hunter. On theſe principles, it is evident much lime is miſapplied, if not thrown away. Many pertinent and judicious hints occur on the beſt methods of applying lime, well ſupported by facts." As I as well as many of your readers are ignorant of the reſult of the experiments of theſe gentlemen, I would be highly gratified, and would hope greatly benefited, were you to devote a few pages of ſome of your next Nos., to give your leaſt informed readers, ſuch as my-

ſelf, a full account of that reſult, as well as of ſuch hints as may prevent either the loſs or miſapplication of our lime; for with us the practice is ſo varying, that we cannot ſay a preferable mode of application is fixed upon.—In your Yorkſhire correſpondent's letter, p. 389 of your 4th No. it is ſaid, "when lime is uſed in this manner, (viz. as a preparation for turnips,) I would recommend it to be laid on in the early part of winter; in that way it will become perfectly effete, before the turnips are ſown; a matter of more importance than is generally imagined." I own I am utterly at a loſs to conceive how the lime, if it be perfectly effete before ſowing the turnips, can conduce to the benefit of the crop, or even of the ground. I would alſo wiſh much to have your opinion, or the opinion of your moſt experienced farmers, in the œconomy of dung; both how the greateſt poſſible quantity may be produced on a farm, and how that quantity may be uſed, ſo as to produce the greateſt poſſible benefit to the ground of that farm?—Whether a given quantity of ſtable dung will prove moſt ſerviceable, when uſed without any mixture, or when mixed up with earth, ſuppoſe high raiſed head ridges, ſcourings of ditches and ſuch like materials? For on this point, I find in my neighbourhood much diverſity of opinion among experienced farmers, and conſequently as much diverſity of practice.—And if the ſtable dung is to be uſed without an earthy mixture, whether it is proper to drive out from the ſtable yard, and have it much rotted before it is ploughed in? or whether, as I've ſometimes done, it is better to plough it in rank, and let it rot in the ground? Any information on theſe ſeveral particulars, will much oblige,

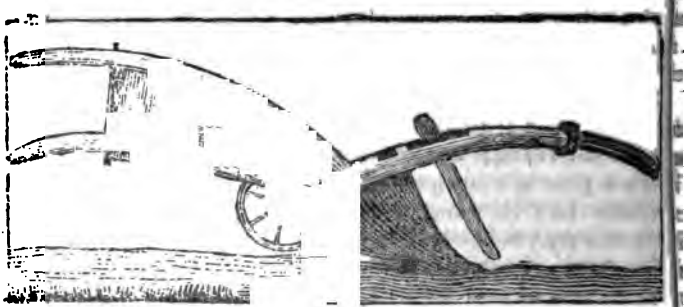
Gentlemen,

Your moſt obedient ſervant,

A NOVICE.

N. B.—The conductors are well pleaſed with the judicious inquiries contained in this letter, which appears to have for its object the inveſtigation of matters of high importance to Britiſh Agriculture; it is reaſonable to ſuppoſe that the Author is as well qualified to contribute information as to put queſtions; on that account we ſolicit a continuance of his correſpondence; but as we are well convinced he *does not think himſelf a Novice*, we recommend a different ſignature to his future communications.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.



The prefixed drawing of a Machine for Drilling Beans and other crops, upon a ſimple and efficient plan, having been tranſmitted to us by a very reſpectable correſpondent, we have duly conſidered the ſame, together with the accurate deſcription given of it, and are much gratified in having it in our power to introduce to public notice an inſtrument of ſuch obvious utility, which unites the ſimple ingenuity by which modern improvements in machinery are ſo much diſtinguiſhed, with the abridgement of labour,—a thing ſo much to be deſired in the cultivation of the ſoil.

As the true Benefactors of mankind are only to be met with amongſt thoſe, whoſe time and talents have been devoted to uſeful ſubjects; we entertain no doubt, that both the genius of the inventor, and ſkill of the manufacturer of this machine, will meet with a due recompence; the former in the reſpect and approbation he ſo juſtly deſerves, the latter in an extenſive ſale of the inſtrument,—which we recommend to the attention of all Proprietors and Farmers.

THE advantages ariſing from applying the drill barrow in this manner, muſt be obvious, and having been already tried, is found to be completely effective in ſaving the labour of a perſon to wheel it, while it depoſits the ſeed in the moſt regular manner; for its own little wheel *a* follows ſo cloſely in the tract of the plough-head, as never to be ſet out of its

courſe by the clods, which often interrupt the progreſs in the uſual mode. This method of working the drill machine is indeed ſo very much adapted to the purpoſe, that it muſt appear aſtoniſhing on reflection, that it has not been ſooner thought of. Mr William Lyon, farmer at Weſter Drylaw in Mid-Lothian, has the merit of firſt putting it in practice from his own idea upon his own farm.

The annexed draught will ſhew its figure and ſituation when at work, it being hooked on by two iron crooks to the rod which connects the two ſtilts of the common plough, (which of neceſſity is employed to draw the furrow or drill for receiving the ſeed,) and, in the operation of ſowing, the chain (ſee the fig.) hangs looſely on the pin *b* of the little ſtilt; but in turning the plough at the ridge end, the ploughman lifts up the fore-end of the barrow, by means of the chain, taking the outer link off the pin, and attaching again the chain to the pin at one or two links farther in, which ſuſpends the wheel *a* a few inches from the ground without motion, and of courſe the grain ceaſes to fall out, till the man again lets out the chain to its full length when he enters the plough, after turning to a new furrow or drill. The pin *b* is the only addition required to the plough.

This improved drill barrow is made in a very correct manner, at the moderate price of 18s. by Meſſrs Brown coachmakers, Abbey-hill, Edinburgh; whoſe implements of huſbandry are indeed in high eſtimation for accuracy and ſtrength, all over the united kingdoms. They make alſo, if required, an indented roller for planting potatoes by this machine, which is now practicable from the new mode of cutting the ſeed by a ſpherical inſtrument, which, with the cutter itſelf, coſt 3s. more, and is made to fit the box in the ſame manner as the fluted roller for ſowing the beans, and takes out and in occaſionally, as may be required. There can be no doubt that a roller for ſowing turnip ſeed may alſo be applied to this ſimple implement, which is not only devoid of complicacy, but completely effective; and which two circumſtances—are the very eſſence of perfection in agricultural machinery.

COMMUNICATIONS ON AMERICAN HUSBANDRY.

No. A.

Method of clearing New Land, and bringing the ſame into Cultivation, as practiſed in ſeveral parts of NEW HAMPSHIRE, *particularly in the Townſhip of* DARTMOUTH.

FELL your trees all one way, at the proper ſeaſon of the year, which is in June, July, or Auguſt; let them lie till May the next year; then top the limbs, and cut off ſuch of the trees as lie high from the ground, which may be done at the rate of two days work to an acre; after a week's dry weather, when the bruſh and ſurface of the ground is dried, ſet fire to the fell'd trees, in different parts of the lot, chiefly the windwardmoſt parts; the fire will rapidly run through it, burning up the bruſh and ſmall limbs, and part of the bodies of the trees, and, at the ſame time, will burn the ſcarf and leaves that lie on the ſurface of the ground, leaving the aſhes, which will be a rich manure.—You are then (in a day or two after the fire) to clear up the remaining timber, which is to be cut up into ſuitable lengths for rolling and carrying together, by mens labour or drawn with oxen, (as the owner may chuſe) into large heaps and burnt: This is done at the expence of 4 to 10 days work per acre, according to the weight of timber and quantity of it unconſumed after the firſt fire. The aſhes made, at theſe heaps, may be collected for making potaſh, or left for the further enrichment of the ground.

The land being thus cleared of the timber, will now exhibit a ſable hue, and is fit for planting Indian corn, at the expence only of about 12 to 15 days labour of a man on each acre, from the felling of the trees incluſively; this clearing muſt be performed as ſpeedily as poſſible, as the ſeaſon (May) is now arrived for planting the corn; no ploughing is required, the ground is mellow, and with eaſe planted; a man will plant an acre per day, the hills at 3½ feet diſtance. The land being thoroughly burned over, will not admit of the

owth of any kind of weed the firſt year, the ſeeds of the eceding year (if any ſuch are ſcattered on the land) being nſumed by the fire: No labour of weeding therefore is re-ired; and the hilling alſo, as practiſed on Indian corn, when anted in old plowed land, is unneceſſary to keep the corn), for the ſmall roots of the trees and the fibres remaining the ground, are ſufficient ſupports to the ſtalks of the corn; therefore requires no labour after planting till you gather ; or the operation of toping, as it is called, or cutting the lks when they are wanted for fodder for cattle, or when it wiſhed to haſten the ripening of the corn, which this opera-n will effect; this is done early in September,—your corn to be gathered in October. In the month of Auguſt pre-ding, you are to ſow the ground with winter wheat for next ar's crop:—The ſowing is performed by the ſeed-man paſ-ig through every third row of the corn; and to perfect the an, you are to ſow your clover, or other graſs-ſeeds in like anner, taking three rows, paſſing in the middle one.—The heat and graſs-ſeed being ſowed, hands are to follow with es, who are to cover the ſeed ſown, by hacking over the round; at the ſame time, cutting up any ſprouts from the ots of the trees which may be ſhooting up, or young trees om ſeeds.—The next year (the third from felling the trees) ou take off a crop of wheat, which, raiſed on upland in this wnſhip, is the fineſt that I ever ſaw, yielding, in this me-od, without plowing the ground, from 20 to 30 buſhels per re. The following crop (the 4th year) will be graſs, leav-ig you a fine field brought into cultivation, with little la-our, and without the uſe of the plough and cattle, and the xpence often more than paid the firſt crop.

To elucidate the advantages of this method of clearing new nds, and bringing them into cultivation, I will accompany his paper with ſtatements of the coſt and profit of ſeveral xperiments actually made on thoſe lands, in which very xact accounts have been kept, and alſo a calculation found-d on thoſe and ſimilar experiments, ſhowing the coſt of learing 200 acres of land, and the profits ariſing from the ame.

No. B.

A Calculation of the Coſt and Profit of Clearing 200 *Acres of Land, taken in the State of Nature, according to the method practiſed in ſome parts of* NEW-HAMPSHIRE, *particularly in the Townſhip of* DARTMOUTH.

		£.	s.	d.
Dr.	FIRST YEAR'S COST, VIZ.			
The trees on 50 acres to be felled in June; the coſt of felling 5s. 3d. to 7s. 6d. per acre; the labour at 2s. 3d. Sterling per day, requiring 2 to 3 days work for felling 1 acre; ſay at 7s. 6d. -		18	15	0
Cr.	FIRST YEAR'S PRODUCE, -	NOTHING.		
	Exceſs in coſt -	18	15	0

Dr.	SECOND YEAR'S COST, VIZ.					
The 50 acres trees felled the firſt year, are, in the month of May, cleared up and planted with Indian corn; the coſt of which clearing is 10s. to 14s. per acre. According to the ſeaſon for burning the timber and bruſh, it commonly requires 5 or 6 days labour:—To clearing an acre of ground after burning at 2s. 3d. per day, ſay at 14s.	L.	35	0	0		
Coſt of ſeed, planting, fencing, &c.		9	0	0		
In September theſe 50 acres to be ſowed with wheat, 50 buſhels, at 4s. 6d.		11	5	0		
200 lb. clover ſeed ſowed alſo -		7	10	0		
Labour of ſowing the wheat and hay ſeed, covering it with hoes by hand, 200 days work, at 2s. 3d. - -		22	10	0		
					85	5 0
Coſt of felling 50 acres more - - -					18	15 0
					L. 104	0 0

SECOND YEAR'S PRODUCE, VIZ. £. s. d.

roduce of 50 acres Indian corn (felled 1ſt year)
ding 20 to 30 buſhels per acre, at 20, is 1000
els, at 2s - - L. 100 0 0
t one-fourth part for expence of
'eſting, and loſs by accident - 25 0 0 75 0 0
—In this method no hoeing is required after the
ting, unleſs weeds ſhould ſpring up, which is
om the caſe; ſuch as may appear in Auguſt or
ember, when the wheat is ſowed, may be cut
n by thoſe who cover the wheat with hoes.
Exceſs in coſt - 29 0 0

L. 104 0 0

THIRD YEAR'S COST, VIZ.

ig the 50 acres felled the 2d year, and planting
ſame with Indian corn, ſowing it with wheat
hay ſeed - - - 85 5 0
50 acres more - - - - 18 15 0

104 0 0

THIRD YEAR'S PRODUCE, VIZ.

oduce in wheat of 50 acres felled the firſt year,
o 25 buſhels per acre, ſay at 15 buſhels, is
els - - - 750
t for reaping - 50
ing - - - 75
ig or ſtacking - 10
— 135

615 at 3s. 9d. 115 6 3
oduce in Indian corn of 50 acres, felled the 2d
, deducting one fourth for harveſting, &c.—
e 2d year - - - - 75 0 0

L. 190 6 3
Coſt - 104 0 0

Profit - 86 6 3

Dr. FOURTH YEAR'S COST, viz.	£.	s.	d.
Clearing the 50 acres felled the third year, and planting the ſame with Indian corn, ſowing it with wheat and hay ſeed - - - -	85	5	0
Felling 50 acres more, (completes the 200 acres)	18	15	0
	104	0	0

Cr. FOURTH YEAR'S PRODUCE, viz.						
50 acres Indian corn, on ground felled 3d year, as above - - - - - - -	75	0	0			
50 acres wheat, on ground felled 2d year	115	6	3			
50 acres in hay, on land felled 1ſt year, now in order for mowing—will produce 50 to 75 tons; ſay 50 tons, at 10s. per ton, which is making large deductions for loſs and expence, the uſual price being 20s. and upwards per ton - - -	25	0	0			
				215	6	3
Coſt -				104	0	0
Profit -				111	6	0

Dr. FIFTH YEAR'S COST, viz.			
Clearing and planting with Indian corn, 50 acres felled the 4th year - - -	44	0	0
Sowing the ſame with wheat and hay ſeed -	41	5	0
	85	5	0

Cr. FIFTH YEAR'S PRODUCE, viz.						
50 acres in wheat, on ground felled 3d year	115	6	3			
50 acres in Indian corn, on ground felled 4th year - - -	75	0	0			
100 acres hay, on ground felled 1ſt and 2d years - - -	50	0	0			
				240	6	3
Coſt -				85	5	0
Profit -				155	1	3

SIXTH YEAR'S COST, VIZ.	£.	s.	d.
eſting 750 buſhels wheat, 135 buſhels at 3s. 9d.	25	6	3
150 tons hay, ſay half - -	75	0	0
	100	6	3

SIXTH YEAR'S PRODUCE, VIZ.

n wheat, 750 buſhels at 3s. 9d.	140	12	6			
in hay, 150 tons, at 20s.	150	0	0			
				290	12	6
Coſt -				100	6	3
Profit -				190	6	3

car's coſt - -	L. 18	15	0			
ear, exceſs in coſt -	29	0	0			
	47	15	0			
:e profit from 6 years cultivation	495	5	0			
				543	0	0
			L.	543	0	0
ear, exceſs in profit -	86	6	3			
- ditto -	111	6	3			
- ditto -	155	1	3			
- ditto -	190	6	3			
				543	0	0
			L.	543	0	0

oregoing calculation, the coſt of felling trees and clear- s put at a price proportionate to wheat at 4s. 6d. per id the wheat for ſeed is charged at that price; and In- at 3s. per buſhel, as ſeed.—On the credit ſide, wheat is)d. and Indian corn at 2s. which is a lower price, eſ- r the latter, than it commonly bears, and a full allow- arveſting is deducted. It appears, that, in 6 years, a iven of 495l. 5s. in clearing 200 acres of land, and of wilderneſs converted into a fiſld of graſs, beſides ced value of the land ſo cleared.

a competent number of good hands can be command- ultivator, he may always come within this calculation, any remarkable accidents.—It will be obſerved, that vances are made for the coſt of harveſting hay, which ears a price of 5 to 6 dollars per ton, and the coſt of is not generally more than one dollar per ton.

(to be continued.)

PART II.

REVIEW OF AGRICULTURAL PUBLICATIONS.

General View of the AGRICULTURE of the County of ARGYLE, with observations on the means of its improvement: drawn up for the conſideration of the Board of Agriculture and Internal Improvement: By John Smith, D. D. one of the Miniſters of Campbelton, 8vo. 322 *pages. Edinburgh,* Mundell and Son; *London,* Wright.

ARGYLESHIRE is a valuable Highland diſtrict, but from local circumſtances, the huſbandry thereof will not afford much information to the amateurs of rural ſcience. It has been fortunate in being reported by a gentleman of reſpectable character, who diſplays in every page the moſt anxious deſire to promote the welfare of the inhabitants. Perhaps, in ſome inſtances, he has miſtaken the means of facilitating improvements, and recommended practices cuſtomary in other diſtricts, without ſufficiently reflecting upon the different circumſtances under which they are executed. Upon ſome theoretical points, declamation is alſo indulged. Theſe things we ſhall notice, with that reſpect which a good man ſuch as Dr Smith juſtly deſerves.

The continental part of Argyle is of conſiderable extent, being calculated by the author to contain 2,731 ſquare miles, or 1,367,500 Scotch acres; and as two ſides of it border upon the ſea, the land is every where indented with deep bays and creeks, ſo as to form the whole country into a number of peninſulas. It contains 25 pariſhes, and 48,965 inhabitants. The landed property is divided amongſt 156 proprietors, whereof one, (the Duke of Argyle) poſſeſſes nearly one ſixth of the whole valuation. The total acres are arranged in the following manner:

1,213,500 in heath hills and paſture.
100,000 arable.
30,000 woods.
24,000 freſh water lakes and rivers.

: arable land, 29,000 acres are computed to lye in the
: of Kintyre, which, in point of extent, when compared
he reſt of the continent, is little more than as 1 to 10.
ppearance of the country is rough and mountainous,
mate moiſt and variable, and the ſoil extremely diver-
as is always the caſe in upland diſtricts.

have delineated theſe particulars, in order that our
s, who are unacquainted with Argyleſhire, may per-
that paſture, not tillage, ſhould chiefly engage the
on of the poſſeſſors. In fact, this is already the
hough the worthy author appears to think that the
, ſhould be more extenſively employed. If he does
r ſo directly, yet a number of his arguments lead to
nclusion. We venture, however, to maintain, that the
: is not calculated for raiſing much grain, and that any
ts to extend the ſcale of tillage, will not prove benefi-
thoſe concerned. By this obſervation, we by no means
to convey an idea, that improvements ought not to be
ted in certain caſes. In the lower parts, agriculture
: much amended, though we ſuſpect that this deſire-
ject will not be accompliſhed by ſmall tenants, a claſs
1 in whoſe favour the author ſeems to entertain ſtrong
ces.

n the 2d ſection of chapter 3d., we learn, that "many
moſt ſubſtantial tenants are lodged in comfortable
, but that the lower ones, which are the moſt numerous
ire ſtill very poorly lodged." This is followed by
ery judicious remarks, concerning the propriety of pro-
the tenantry with ſuitable dwelling houſes and offices,
we hope will not eſcape the notice of the Argyleſhire
:tors. We have, in all our experience of Britiſh huſ-
, uniformly found, that the general ſtate of farming
: pretty correctly aſcertained, by a reference to the con-
of the farm-houſes and offices of the diſtrict. In pro-
1 as rural ſcience is diffuſed, comfortable home accom-
on is likewiſe expected, and the landlord, who injudi-
declines to provide commodious buildings, is not only
o his own intereſt, but indirectly an enemy to the proſ-
of agriculture.

he chapter upon the *ſize of farms*, we apprehend there
h matter wholly inapplicable to the diſtrict of Argyle.
ng, for argument's ſake, that the intereſt of the country
:d the ſize of tillage farms to be curtailed, ſtill it ap-
rom this work, that, in the lower parts of the county,

where tillage is more attended to than paſturage, or w
theſe two objects are conjoined, the poſſeſſions are gen
of a moderate ſize. So far, even upon the author's own
ciples, the public welfare is guarded ſufficiently by the
practice. What is ſaid, therefore, can only apply t
ſheep-farms in the higher diſtricts, which are confeſſed
a great extent, and neceſſarily muſt be ſo, if it is meant
the proprietor ſhould be benefited by the fee-ſimple, o
tenant by the leaſehold of the premiſes. It does not a
that in ſuch ſituations, the plough can be uſed with a
tage, nor is any thing more certain than that, where th
mate is unfavourable, the ſoil ſterile, and the country m
tainous, aration ought not to be exerciſed. The value o
labour in ſuch caſes almoſt conſumes the crop, whil
poor occupant derives no profitable return from his mo
dent exertions. The ſyſtem, which can be carried on
ſmalleſt expence, and with the moſt advantage to the p
intereſted, is, therefore, in every point of view moſt elig
and if the land will yield the moſt profitable return whe
ployed in breeding and feeding cattle and ſheep, it is a
monſtrable as two and two make four, that this ſyſtem
to be preferred.

That ſuch a ſyſtem will leſſen the uſeful populatio
country, we ſtrenuouſly deny, though Dr Smith affirms
this "is obvious to the moſt ſhallow capacity." We
down as an axiom, that the mode of occupation, which
mits the tenant to pay the greateſt rent, will, in gener
moſt favourable to population. It is, without all di
moſt beneficial to the community at large, for how
greater rent be paid, unleſs more commodities are prod
This increaſed produce ſerves to ſupport a ſuperior po
tion, while the augmented rent enables the proprietor to
more ſervants, or execute improvements upon his e
which cannot be accompliſhed without hands being empl
The tenant himſelf, from poſſeſſing a ſuitable capital
can undertake many works, utterly out of the power of
tenants, who are not only incapable of ſuch exertion, bu
main in a moſt liſtleſs deplorable and uncomfortable ſtat

When Dr Smith ſpeaks of cultivating and improving
Highlands of Argyleſhire (and it is to this part of the c
try his arguments muſt be applied, ſeeing he acknowl
the ſize of farms to be moderate in the lowland diſtrict
certainly did not reflect upon local circumſtances, or
their cultivation could in any reſpect be beneficial to the

munity. Under theſe impreſſions, we conſider the moſt of what is ſaid, pages 24 to 34, incluſive, to be inapplicable to the huſbandry of the diſtrict reported. To argue againſt large towns and cities, is alſo as foreign to the queſtion, when treating of Argyleſhire huſbandry, as it would be in the hiſtory of Otaheite.

We extract two paragraphs from the ſection upon *rent*. The *firſt* ſhews, that the author poſſeſſes a liberal and benevolent mind, the other ſtrikingly diſplays the abject and depreſſed ſtate of the tenantry.

"The occupiers of land, whether in paſturage or tillage, ought certainly to be able, like labourers or tradeſmen, to live by their occupation, and to ſupport their families by their daily care and labour. The intereſt of the money inveſted in their ſtock, with the proper allowance for tear, wear, and riſk, they ſhould be able to ſave as a proviſion for their families, and for old age; as the money ſo inveſted would give this return, if laid out on intereſt, without any trouble whatever. It cannot be conſidered as any part of the produce of the ground: and therefore no part of it ought, in equity, to enter into the payment of the rent; and yet not one in ten, perhaps, is able to ſave it; nor do they commonly advert that ſo much ought to be ſaved in juſtice. They are generally ſatisfied, if they can keep their ſtock undiminiſhed; ſo that the buſineſs, in general, returns much leſs to thoſe engaged in it than almoſt any other. A happy predilection in favour of the occupation in which they were brought up, is what induces ſo many to follow it. Perhaps it may alſo be ſaid, that there is implanted in the human mind, for wiſe purpoſes, a certain innate diſpoſition, or inſtinct, which leads it to delight in rural occupations.

"The rents in general, eſpecially upon the larger eſtates, are paid in money: but tenants on the leſſer eſtates, and near their landlord, often pay ſome of the rent in kind, and are almoſt always ſubject to ſervitudes. Peats muſt be made and led; ſo muſt the hay: aſſiſtance muſt, perhaps, be given in ſeed-time and harveſt. So many wedders, fowls, eggs, butter and cheeſe, lint, wool, oats, meal: ſo much ſpinning from the wives, or perhaps ſo much yarn; and ſometimes they muſt pay the weaver, and give it in ſheets and blankets. In ſhort, ſo many hundred things are required by the laird, and ſo many hundred things by the lady, that it is impoſſible to pay them. It is ſometimes expected, over and above all this, that the poor wretches ſhall come with preſents, when they themſelves are almoſt objects of charity! And to keep them in perfect dependence, they have often no leaſes. The miſerable creatures on

lands under this management, have neither meat, nor clothes, nor habitations; and a ſtranger would know them and their lands in paſſing, as eaſily as Solomon did the garden of the ſluggard. Such practices cannot be reprobated in too ſtrong terms. They are the ruin of the tenant firſt; and, in the end, they will ruin the landlord."

We obſerve the following judicious note annexed to the ſection upon *rent:*

"What proportion the rent of a farm ſhould bear to its produce, depends ſo much on ſoil, climate, ſituation, and other circumſtances, that no general rule can be laid down on the ſubject. On the rent of ſheep-lands, as occupied with us at preſent, ſome obſervations may be ſeen in Chap. XIII. Sect. 2. In regard to arable lands more particularly, it is a common, though perhaps not a juſt remark, that 1-third of the produce ſhould go for rent, 1-3d for expence of management, and 1-3d for the farmer's profit, intereſt, &c. The oldeſt obſervation extant on this ſubject, is in Gen. xlvii. 24.; where 1-5th is allowed for rent, 1-5th for ſeed, 1-5th for food, 1-5th for ſervants, and 1-5th to lay by for proviſion to children."

Thoſe people who are for allowing the proprietor one-third of the produce, ſeldom ſpecify whether it is the groſs or diſpoſeable produce that is meant. In general caſes, one-third of the groſs produce is too much for rent, becauſe two-fifths, and in ſome inſtances one-half, is conſumed upon the premiſſes, independent of the portion of land under an unproductive fallow. If they mean one-third of the diſpoſeable produce, the ſcale would be regulated nearly upon the principles mentioned in ſacred writ. No fixed principle, however, will apply in all caſes, for, in different ſituations, produce is raiſed at different degrees of expence, but ſuch things, if left to themſelves, will generally find a proper level.

Tithes were valued in Argyleſhire at an earlier period than in other counties, a proof that the proprietors knew their own intereſt, though it is to be lamented, that this ſhould operate ſo ſeverely againſt the eſtabliſhed clergy. We believe that ſtipends in this diſtrict are ſmaller than in other parts of Scotland, while, under the exiſting laws, they cannot be augmented. The loſs ſuſtained in conſequence by the ſtate, is deſcribed in a pointed and candid manner:

"In conſequence of this, (the fall in the value of money) clergymen are now ſunk in their rank in ſociety, and fallen almoſt to that which ſchoolmaſters held formerly; ſo that many of them are obliged to betake themſelves to other ſhifts, ſuch as farming and grazing, in order to ſupport their families. By this, their dignity, utility, and influence, are leſſened; and the cauſe of religion and virtue, and, of courſe, the true intereſt of the nation, ſuffers: For, let our vain and new philoſophers allege what they will, there can be no national proſperity, of any duration, without religion; and there can be no religion without a reſpectable clergy, nor a reſpectable clergy without a decent maintenance being annexed to the office."

Dr Smith is a friend to *leaſes*, without which, he conſiders that landlords "can expect no improvement, and conſequently leſs riſe of rent." Some of the prevailing covenants may be juſtly viewed as objectionable: viz. That the rent ſhould be paid at Martinmas, after the crop is reaped, which, it is evident, is impracticable upon arable farms, unleſs the tenant's capital ſtock is thus employed. The repairing of buildings appears to be too much laid upon the tenantry, though the general cuſtom of Scotland will ſanction the meaſure. In other reſpects, the Argyleſhire leaſes do not impoſe any ſevere burthens.

The *huſbandry* of Argyleſhire may be more accurately aſcertained, from the following extract, than if a hundred folio volumes were written in illuſtration thereof.

"Thoſe who have large poſſeſſions live well; thoſe who have ſmall ones live poorly. The ſmall farmers, for nine or ten months in the year, make generally two, and ſometimes three meals a-day of potatoes, with herrings or milk. Such as can afford it, ſalt a cow in winter, and kill a ſheep or two in harveſt. Oatmeal pottage, or oatmeal jelly (*ſowens*), make commonly the third meal a day, with milk; and oaten or bear bread, when the potatoes fail, ſupply their place. In Kintyre it is cuſtomary to take ſome thin pottage, or a little bread and milk, before they begin work in the morning; and after dinner, ſhould it even be potatoes and herring, or fleſh and broth, they have commonly a little bread and milk, by way of deſert or ſupplement. But neither of theſe cuſtoms are known in the other parts of the county."

In the chapter upon *implements*, mention is made of Mr Campbell's improved plough, "which, inſtead of a coulter,

has an erect plate of iron connected with the ſock, the intention of this contrivance being to ſtrengthen the beam; and keep the plough from being choaked in ſtubble ground." If the plough poſſeſſes no other merits than theſe, the premium from the Highland Society was certainly ill awarded. Why tempt the people to leave a high ſtubble, in a county where fodder is ſcarce? No plough will choke in ſtubble ground, if the crop is cut in a proper manner.

Chapter 6. contains ſome excellent obſervations relative to *incloſures*. We ſelect the firſt paragraph as a ſpecimen:

"Good encloſures are the foundation of all improvement. Whether lands are employed in tillage or in paſturage, enclo ſures are neceſſary in order to turn them to the beſt account. In arable lands they ſave the ground from being poached when wet, and put it in the farmer's power to raiſe green crops with much greater advantage than he can do without them. In paſture lands they ſave the expence of herding; allow the cattle to graze freely, without being teazed by herds and dogs; and, by giving them clean graſs and a change of paſture as they need it, enable them to thrive better than they could do otherwiſe, and ſupport a greater number on the ſame extent of ground. Encloſures are likewiſe of great benefit in the view of giving ſhelter to ſome grounds, and draining others, according to the nature of the grounds and the kinds of fences or enclo ſures. By judicious encloſures, moſt low-lying arable grounds might be made of more value, by at leaſt one third, to the occupier, as well as of great benefit to the public, by increaſing the quantity of corn, wool, flax, butter, cheeſe, butcher's meat, manufactures; and, by means of all theſe articles of food and employment, greatly adding to the riches and population of the country."

We cannot avoid remarking, that the Argyleſhire practice of taking 6 and 7½ per cent. from the tenant, for money expended upon incloſures, is highly unreaſonable, notwithſtanding it is ſanctioned by the cuſtom of other counties. "It is hard indeed," as the author juſtly obſerves, "if lands cannot be improved under double the profit which is generally had from buying them." In every caſe where the tenant is bound to ſupport incloſures, to take ſuch a rate of intereſt deſerves to be reprobated as an uſurious tranſaction.

In the ſection upon *tillage*, p. 67. Dr Smith gives an opinion concerning the changing and ſtreighting of crooked ridges, which according to our experience is not ſtrictly correct: He ſays it can hardly be performed with the plough

at burying much of the beſt ſoil, and therefore re-
ends the ſpade to be uſed. We who have ſtreighted a
lerable extent of land formerly in the "*ſerpentine ſtile*,"
ſely aver, that the operation may be executed by the
h without being attended by dangerous conſequences.
t the ſame time acknowledged that a great degree of at-
n is required in the levelling of the old ridges and form-
he new ones, ſo as the ſurface and ſubſoil may be ſuffi-
ly mixed. For this purpoſe, each ploughing in length
d be followed with one acroſs; repeated harrowings
rollings are alſo neceſſary. A doſe of hot lime is of
utility in quickening the ſoil, formerly out of the reach
e ſun and air. If dung is alſo adminiſtered, very little
d attends the change, though we repeat, that a great de-
of attention is required in the ſeveral operations.

hen treating on the *rotation of crops*, Dr Smith judici-
recommends a variety of alterations of the common
ice; but we are not ſure if the comparative produce of
arms, managed in the old and new way, be ſtated in ſuch
nner as to carry conviction to the minds of thoſe who
ot in other reſpects ſufficiently informed. In p. 77, he
s a difference in favour of the ſecond ſtate, of 62l. 2s.
ut pointing out at what expence the increaſed produce
be gained. For inſtance, the paſture-graſs in the firſt
is charged at 5s. per acre, whereas in the other 20s. per
is allowed. We need hardly ſay, that the ſuperiority
e laſt would ariſe from improvements made either by
hing, manuring, draining, or incloſing; conſequently,
nly fair to deduct from the balance the expence of all
xtra labour and outlay. Theſe calculations remind us
me we have ſeen in the writings of the Engliſh Econo-
, particularly in thoſe of Mr Arthur Young.

ie *climate* of Argyleſhire appears well adapted to the
re of *flax*, and we coincide with the author in thinking
the growth of this plant may be conſiderably extended.

w things would contribute more to the advantage of this
ty than the raiſing a great quantity of flax, for which our
nd climate are well adapted. Our climate is warm and
; and we have a great deal of good ſandy loam, which
beſt ground for flax. If the culture of this plant were
ded as far as the other operations of the farmer would al-
or if the ground, when tilled, were let to the poor, or
rſons who, as in Holland, would make it their ſole buſi-

neſs to attend to it; it would prove an immenſe benefit to the county, and furniſh employment to the poor, eſpecially to the female part of them, in every ſtage of its manufacture. When the crop is tolerably good, the produce of a ſingle acre may be eſtimated at 15l. on the field, at 20l. when it comes from the mill, at 60l. when ſpun into yarn, and at more than a 100l. when wrought into cloth, and bleached. Thus 1000 acres, (which would be but 40 to every pariſh on the continent) would yield materials for a yearly produce of 100,000l.

In a country where ſtock muſt neceſſarily be an object of primary attention, the cultivation of *turnips* for winter food ought not to be neglected. We obſerve, with concern, that only a few acres are as yet raiſed by the farmers, though no branch of huſbandry deſerves ſuch ſedulity. Four acres in one ſeaſon is the greateſt quantity hitherto raiſed by a farmer in this county, for which a premium was obtained from the Highland Society. In deſcribing the utility of ruta-baga, Dr S. adds, "it is ſaid that horſes will eat it, though they will ſeldom eat turnips." Horſes will eat and thrive upon both, though undoubtedly beſt upon ruta-baga, becauſe its qualities are more nutricious. A foot-note, p. 103, which we underſtand is an extract from Encyclopedia Britannica, deſcribes carrots as the beſt food for horſes, which likely is the caſe; but, when 3 acres of this root, grown at Parlington in Yorkſhire, is ſtated as feeding 20 work horſes, 4 bullocks, and 6 milk cows for 7 months, viz. from the end of September to the 1ſt of May, beſides fattening 30 hogs on the refuſe, we are tempted to ſmile. Taking the produce at 10 tons per acre, which the Bath papers eſtimate to be an average one, the crops would turn out 67,200 lb. averdupoiſe, which divided among 30 horſes, bullocks, and cows, for 7 months or 210 days, would juſt give 10 pounds 10 oz. per day to each animal, independent of what was conſumed by the porkers! It is added, "they had no other food but a *little hay*." We cannot ſay what is here meant by the expreſſion *little*, but certainly with 10 lb. of carrots, each horſe would eat 2 Engliſh ſtones of hay per day, and would not do much work, unleſs aided by a feed of corn likewiſe.

We obſerve a quotation from Young's Annals, of the like import with the above, reſpecting the advantage of conſuming clover in the houſe inſtead of eating it in the field, a point upon which, abſtractedly conſidered, there can be no diſpute. In the quotation, Mr Ramſay of Ormſby near Yarmouth, is

ted to have soiled 20 horses, 7 cows, 5 calves, and 5 pigs on 7 acres for 17 weeks. Now let us see what this will give each beast per day. A good crop of hay, upon an English statute acre, will not exceed 240 Scotch stone—Take the second crop as equal to one-half of the first, this will make 360 stone, which, at 22lb. averdupoise each, is 55,440 lb. of dry hay, or, according to the common calculation of 4 lb. green for one of dry, it is 221,760 lb. As the number of the animals supported upon the crop amounted to 37, and the period 17 weeks or 119 days, the quantity of grass could not exceed fifty averdupoise pounds per day to each animal, or what would make little more than half a Scotch stone of hay. We cannot help expressing our surprise, that a gentleman of Dr Smith's discernment should have adopted such quotations, or built upon them, seeing the rottenness of the foundation is so easily ascertained.

The chapter upon *woods* and *plantations* conveys much useful information: After stating that the soil, climate, and situation of the country are remarkably well adapted for planting and raising timber, " Dr S. proceeds thus:

" The expence of planting will depend much on the size of the enclosure; the expence per acre being always less in proportion as the enclosure is larger. The fencing of an inclosure of 20 acres exceeds a fifth of the cost, though it is but the 25th of the space, of one of 500. In the north of Scotland, " the ' expence of enclosing a plantation of at least 120 acres, and ' planting it with Scotch fir, is generally calculated at 20s. per ' acre, and the undertaker upholds the plants for seven years." In the east of England, the expence of enclosing and planting is said to be 3l. per acre. Let us take the medium between the two, and suppose a plantation of 500 acres to cost 1000l. or 2l. per acre. In most cases much of the expence of enclosing will probably be saved by sea-shore, gullets, precipices, and other advantages of ground. The plants too may be raised from the seed, and set by the planter's own servants, at a small expence; or, instead of plants, the seeds of trees may be sown in the plantation, by which the expence will be greatly lessened. But, without reckoning on these savings, let us abide by the first estimate of 2l. per acre, and proceed to calculate the return.

Suppose, then, that at the end of 11 or 12 years, only two thirds of 5000 plants, originally set in the acre, are found to have done well; of these, one half, or 1666, may be taken away for railing, firing, &c. and if sold so low as a halfpenny

each, they will come to 3l. 9s. 5d. which will be more than defray the original expence with intereſt.

From the age of 16 to 25, a thouſand more may be gradually taken out of the acre, which, at 4d. each, will make - -	L. 16	13	4
The 666 remaining on the acre will, at 50 years, be worth 2s. 6d. each - -	83	5	0
	L. 99	18	4

This divided by 50 will give about 2l. a-year for the acre, and near 50,000l. from the whole plantation, without reckoning intereſt on the thinnings, or any advantage of graſs and ſhelter, which the plantation may give to cattle after they may be let in to it with ſafety."

We cannot agree with the opinion given p. 172. viz. that, by expending 3l. per acre upon the draining of *waſte land*, the annual value will be raiſed from 1s. or 3s. per acre, to 15s. or 20s. Draining is without doubt abſolutely neceſſary, but ſtill the advantages attending it upon lands commonly ſtiled *waſte*, will be very inferior to what is here ſtated. The expence of incloſing and manuring ought certainly to be included; for, without theſe meliorations, the rents condeſcended upon would not be gained. While the merits of improvements are under conſideration, it is but fair to ſtate the probable expence—In page 176, Dr Smith erroneouſly ſtates, that waſte lands are improved in England, though often taxed for tythes and poor rates, to the amount of 5s. and 10s. per acre. We beg leave to inform him, that, in every diviſion-bill we have ſeen, a part of the waſte is ſet apart to the tythe-holder, and that the lands improved by the owners are in all time coming tythe-free.

The chapter upon *improvements* is well worth peruſing; but we are not ſure whether the author is well founded in what he ſays concerning the application of lime: Strong clay ſoil, ſuch as that of Kintyre, would require a great deal more than 120 Wincheſter buſhels to ſtimulate it, and the quantity ought to be increaſed inſtead of being diminiſhed, when a ſecond doſe is adminiſtered. We are rather in the dark with regard to the oils and ſubſtances which lime attracts from the atmoſphere, therefore cannot recommend that it ſhould be allowed to remain upon the ſurface for any length of time. The beſt cultivators are decidedly of opinion, that the ſooner lime is incorporated with the ſoil, the quick-

are its operations—Some beneficial information is given ſpecting the advantages of mixing lime with earth, &c. and ing it by way of compoſt. We have ſeen the utility of this ompoſt in caſes where the naked article totally failed. The roper management of dung is alſo accurately deſcribed.

The Argyleſhire *breed of cattle* are famous over all Britain, nd, before ſheep were introduced, they were confeſſedly the nly article poſſeſſed by the tenantry from which rents could e paid. This valuable variety of live ſtock are ſmall but ardy breed, and, from being generally ſtinted in the proper uantity of food, are prevented from attaining to the ſize they re otherwiſe capable of. It is evident that better keep both n ſummer and winter, is neceſſary: This would alſo fit them or market at an earlier period, though we believe it would eſſen the value of the beef.

The firſt ſection of chapter 13th, which is devoted to this ubject, we can with confidence recommend to the conſidera- ion of our readers. A valuable paper from *Mr Campbell f Combie* is included, which we would willingly have ex- racted did our limits permit. The ſheep-huſbandry of the ounty occupies the 2d ſection of the chapter, and though r Smith candidly acknowledges that "the mountains of rgyleſhire are better adapted for ſheep than for black cat- e," and that "under the ſheep-ſyſtem they make a much etter return both to the farmer and the landlord, and fur- iſh a large fund for manufacture and commerce," yet he inks "all theſe advantages are more than balanced by the eſt which ſheep have produced upon population." While e reſpect the philanthropy which dictated theſe, and a num- er of other ſimilar ſentiments, we are under the neceſſity of fering a few remarks upon a ſyſtem incongruous in every ſpect, with a work profeſſedly written for the purpoſe of iſſeminating improvements.

We might premiſe our remarks, by inquiring whether ie rearing of black cattle, abſtractedly conſidered, neceſſari- furniſhes employment to a greater number of people than the land upon which they are ſupported was uſed in rear- ig or feeding ſheep. Certainly, "a ſhepherd and his dog,"—a hraſe not original, but banded about ſince the days of Hen- 8th—are capable of watching over the one as well as the ther, and, therefore, if a ſuitable number are entruſted to im, in both caſes, the ſcale of population is not affected. We e aware, it may be here urged, that the extent of ground

which muſt be kept in cultivation for providing winter to the cattle, conſtitutes the difference. Though this argument that may be uſed againſt the ſheep-huſband every diſtrict, we conceive it carries no weight in the ſent inſtance. The mountains of Argyleſhire are nat incapable of being cultivated by the plough, conſequei ſyſtem which includes aration is not reconcileable wit due management of the territory: Shall the landlord b gared, the tenant ſtarved, and the moſt uſeful of our factures limited, merely that a ſyſtem might be conti which even its warmeſt ſupporters acknowledge to be cal to the national proſperity in every other reſpect, that of population? If population was leſſened by a introduction of the ſheep-huſbandry in the Highlands cumſtance we don't believe,) better would it be for the ed proprietors, to ſupport the conſequent excreſcen their private expence, than allow their property to be ed, and deteriorated by the continuance of a ſyſtem which both the people and the ſtock are ſtinted and ed.

In arranging the rural economy of a country, it ou be a chief object, that every part of the ſoil is emplo ſuch a manner as may enſure the greateſt poſſible ret the national fund or capital ſtock: Every improv whatever tends to promote this purpoſe; even the plan timber upon waſte land, which at firſt view is eminentl judicial to population, deſerves to be ranked as an im ment of conſiderable importance. If the ſoil in one is beneficially employed, the conſequences are directly f able to population in others. Work is hereby provi people in other quarters, and the profits derived from t article, in the firſt inſtance, joined to what is gained working it up in the ſucceeding ſtages, contribute to t creaſe of national proſperity.

Applying the above obſervations to the diſtrict unde ſideration, it neceſſarily follows, that if the mount diſtrict can be more profitably employed in breeding than in aration, or under the cattle-ſyſtem, that ſuch the greateſt public utility, and ought to be encouraged landed proprietors. We have purpoſely avoided the ſo far as *local population* is affected, being convinced, t a general point of view, it is preciſely the ſame country, whether the people reſide in one diſtrict or an

provided they are comfortably supported and usefully employed.

We are sorry to notice, that an atte[illegible] made by that worthy nobleman the Duke of Argyle, and [illegible]s, to establish the woollen manufacture at [illegible], [illegible] succeeded so well as could have been wished; a[illegible]t trade is now chiefly confined to the making of car[illegible]s. To introduce manufactures is at all times a difficult [illegible]ss, as the first beginners are necessarily obliged to [illegible]ert [illegible] every branch from the purchase of wool to the sel[illegible] the article, which is inconsistent with the perfection atta[illegible] when labour is properly divided among the several [illegible]ns employed.

Amongst the obstacles to improve[illegible]t, the unhappy frequency of our wars is classed, and a computation is made, that every war drains Argyleshire of between 3000 and 4000 of its most active and able hands. While we cordially concur with the worthy author, in wishing that "some general court could be established in Europe, in which all the quarrels of its ruling powers could be adjusted without the dreadful appeal to the cannon, the bayonet, and the sword,"—we cannot help remarking, that the case complained of proves, that the population of Argyleshire is superior to what is required for useful purposes. In those districts, where husbandry is successfully practised, or where a demand for labour prevails, it is impossible, under every exertion, to recruit the most favourite regiment; because employment, of every kind, can in such instances be readily procured, the want of which is the strongest enticement for a man to engage in hostile affairs.

We must now finish this article, which has run to a greater length than we intended.

If Dr S. has manifested some prejudices against what, with strict propriety, may be called the new husbandry of the Highlands, he, in many instances, has compensated this defect by the ardent desire displayed to promote the welfare and happiness of his countrymen. When the work arrives at a second edition, we shall feel much gratification should any of the above remarks then prove serviceable.

N.

MEMORIAL concerning the preſent ſcarcity of Grain in Scotland, with a propoſal for an eaſy, effectual, and expeditious Remedy. By the Reverend Profeſſor WALKER. Edinburgh, *Stewart and Co.* 16 pages Octavo.

VARIOUS opinions are entertained by ſpeculative men relative to the preſent ſcarcity, and numerous projects have been ſubmitted to public conſideration, for preventing the repetition of ſuch a calamity. Among people of common mean ſuch as are practically acquainted with rural affairs, there is not a ſhadow of difference as to the *cauſe*, though they may differ with reſpect to the *extent* of the effect. They, one and all, aſſign it to the unkindly ſeaſons with which we have been viſited, which produced two moſt deficient crops; and the juſtice of their concluſions has been ſanctioned by the higheſt national authorities.

Profeſſor Walker, however, without reflecting upon the cold humid ſeaſon of 1799, or the unfavourable autumn which accompanied the crop of 1800, from the time that ploughing for it commenced, till it was ready for the ſickle, thinks that the real cauſe of the ſcarcity "is of a more remote kind," and therefore ſuggeſts a remedy which he views as more effectual, and expeditious." The cauſe, which he aſſigns, is the increaſe of paſturage, and the conſequent abridgement of tillage, ariſing from the great conſumption of butcher meat by the inhabitants of Scotland; and this alteration of our mode of living, he thinks has been remarkable ſince 1750. The remedy is to plough out, or reſtore to tillage, a certain proportion of the paſture lands, by which meaſure, before the end of September, this part of the kingdom may be ſupplied with plenty and cheapneſs."

To us, who have paid conſiderable attention to the ſubject, and who have known the uſual modes of farming practiſed in Scotland for a number of years, the principles aſſumed by the learned profeſſor, appear wholly unſupported by facts. We are rather inclined to believe, that tillage has conſiderably increaſed ſince 1750, and that, under the ſuperior management exerciſed, the produce of a given ſpot of ground has been greatly augmented: Let any perſon reflect upon the extenſive improvements introduced ſince the æra condeſcended on, particularly in the ſouthern and weſtern counties, and he muſt acknowledge that aration is in no reſpect abridged;

nt, on the contrary, it is practiſed upon as large a ſcale as conſiſtent with good management, and the welfare of the country. Paſturage, in general, does not ſeem to be the hobby of Scottiſh farmers, or why are they commonly reſtricted from ploughing more than a certain part of their poſſeſſions? a fact, the quantity of graſs land does not exceed what is required; for butcher-meat, milk, cheeſe, and butter, are equally ſcarce as grain, while the rent is fully as much increaſed in the one caſe as in the other: Beſides, the change in the mode of living from grain and vegetables to butcher-meat, might to have leſſened the demand for the former articles, as, under a parity of circumſtances, a ſmaller quantity of them would be conſumed.

The compariſon made between the produce of corn and cattle, on the ſame ſpace of ground, is partly true and partly erroneous. We believe, that the quantity of meat produced from an acre of graſs land, is pretty correctly ſtated, and ſo may be the bolls of grain, at leaſt, while the land carries oats; but the profeſſor, when he mentions that an acre of this grain will yield 1280 lb. of meal, and feed three laborious men in health and vigour, for the ſame time as the acre of graſs will feed one man, evidently aſſumes too much—he makes his whole crop diſpoſeable, without attending, that nearly one fourth of it muſt be deducted for ſeed and horſe corn, which is nearly the ſame thing as if he had credited his graſs land for the whole weight of the animals fed upon it. We are glad to hear, that an acre of graſs land, capable of feeding five ſheep, can be got at forty ſhillings, as our information led us to believe, that the market-value was much higher. It is alſo with pleaſure we learn, that ſuch a handſome profit as two pounds fifteen ſhillings per acre, can be gained by the grazier after paying that rent; though we apprehend this circumſtance, if correctly ſtated, will prove an unanſwerable argument againſt ploughing ſuch land.

Upon the ſuppoſition that the profeſſor's *remedy* is to be adopted, we muſt enter our ſolemn diſſent from the plan recommended for putting it in execution: To take two crops of oats and one of barley; or, what is infinitely worſe, to take three crops of oats, and then lay down the land to paſture, would be attended with dreadful miſchief to the intereſt of the proprietor, as well as to the future proſperity of the country. Inſtead of a profitable crop of clover and rye graſs being got in the fourth year, the landlord would moſt likely get a ſilly crop of rye-graſs, along with a full crop of this-

tles, quickens, and other noxious weeds. All old pas land requires to be completely ſummer-fallowed before ficial graſſes are ſown; and the proprietor, or tenant, neglects this neceſſary meaſure, acts in direct oppoſitio his own intereſt.

Without noticing the practical part of the memoria greater length, as we hardly believe the author will have ny diſciples, we may conclude with a ſingle obſervation, That if the ſcarcity was attributable to the abridgemen tillage, the like calamity might have happened in 1798, well as during the laſt and preſent unfortunate years; public inclination for butcher-meat being equally prev at each of theſe periods: in a word, the return of fa ſeaſons will convince every perſon, that the cauſe of the ſent ſcarcity was not of "*a remote kind*," but that it was pen to our eyes, and recogniſable by ſuch as would take trouble of inveſtigating it.

A correſpondent, whoſe opinion is entitled to much re having recommended that a ſection of this department sh be devoted to "*A Review of the Reviewers*," we have, ag ble to his advice, reſolved to engraft this branch upon original plan, and alſo to extend it further, by including f tures upon ſuch communications as may have appeared in own work, which require to be criticiſed. The editor the London periodical publications, are in a great meaſur norant of *rural affairs*; at leaſt, their knowledge goe farther than theory; hence, their reviews of agricult works, are partial, ſuperficial, and often erroneous. T are more adapted to miſlead than to direct the public mi for with theſe *judges of the nominative caſe*, error, if pla bly told, will paſs with impunity, while, in other caſes, merited ſeverity will be diſpenſed with a rigorous hand.

The Reviewers Reviewed.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

The West York Agricultural Survey, minutely reviewed, by a gentleman resident in the Riding, in your 2d. and 3d. Numbers, having been severely handled in the August *British Critic*, and November *Monthly Review*; I beg leave to say a few words explanatory of the principles upon which that Survey was written, and to offer some remarks upon the criticisms made by the editors of these two periodical publications.

Every person in the least acquainted with the English Rural System, will be sufficiently apprized, that the bond of connection betwixt landlord and tenant, is formed in such a manner, as to render the latter more dependent than what is compatible with the state of enlightened society, or the practice of improved husbandry. The legal policy of the country may be considered as inimical to improvements, and the natural consequence of these radical defects has been, that, while trade and manufactures have flourished, agriculture has continued nearly stationary for a century past, unless in those districts where these obstacles have prevailed in a less degree.

When the Yorkshire surveyors were fully acquainted with the prevalent agricultural system of the district, they were at no loss to comprehend the causes which prevented the most useful of the sciences from advancing towards perfection, with as much rapidity as others. They believed that, unless the system was totally changed, no material improvement could be accomplished, and they judged, that the recent institution of the Agricultural Board was a proof, that these subjects would at least meet with an impartial investigation. Upon these grounds, they, in their original report, entered at large upon the articles of leases, covenants, tythes, &c.; and perhaps these subjects were discussed, if not in a superior, yet certainly in a more minute manner than by any of their brethren.

It will readily be conjectured, that a considerable part of such a report was badly calculated to procure them the favour of the parties interested. Many of the proprietors, it is believed, were offended by the observations upon leases,

and thought, that if diſcretionary management was commit
to the tenantry, their property would be rendered uſel
The tithe-holders gnaſhed their teeth at the propoſal o
commutation; while the honeſt farmers felt hurt at the c
ſure beſtowed upon ſeveral prevalent practices, without
flecting that the ſurveyors attributed the defective prac
not to them, but to the imperfectneſs of the general ſyſt
Under theſe circumſtances, the ſurvey could not be popu
nor did the ſurveyors expect it. They knew that, in gen
caſes, to tell a man his error, is the ſure way to get his
mity; conſequently the reception given to their gratui
exertions did not excite much ſurpriſe.

The outlines, or rough ſketch of the report, having
widely circulated, a conſiderable number of copies were
turned to the Board with marginal remarks. Theſe
put into the hands of one of the ſurveyors, who, at the
ſing deſire of Sir John Sinclair, had undertaken to arr
the work for publication, agreeable to the plan deviſe
the Board; and, after making inquiries in every quarte
the diſtrict, concerning additional information, a Ge
View of the Weſt York Huſbandry was ſubmitted to p
conſideration.

Having thus ſtated the principles upon which this ge
view was written, and the ſeveral circumſtances conn
with its publication, allow me now to notice what has
urged againſt it by the *Britiſh Critic* and *Monthly Revie*

The firſt of theſe gentlemen, who is well known t
fierce for *moderation*, and avowedly hoſtile to amending
groſſeſt abuſe, has bellowed out, "*Ne ſutor ultra crepid*
in the ears of the county ſurveyors, till he is hoarſe. I
this occaſion he "out-Herods Herod," and belches ou
anathemas with equal zeal, as if the improvements, re
mended by the author, were calculated to overturn our
py conſtitution in Church and State. With him, the p
who propoſes to renovate the poor-laws, or to com
tithes, is conſidered as

"A Jacobin, a beaſt, a knave."

He entertains a violent prejudice againſt the ſurve
becauſe they are North Britons, which, no doubt, is ſu
original and heinous offence, as cannot be expiated.

"———— D——n a Scot,
How can the rogues pretend to ſenſe,
Their pound is only twenty pence."

Reme

Where was the neceſſity," exclaims the ſapient Britiſh , "for ſending three *North Britons* on ſuch a miſſion ght not *Engliſhmen* have been found qualified to view eport faithfully concerning an Engliſh county" Theſe nt compliments are certainly quite conſiſtent with the ſentiments upon the utility of a general union of the Britiſh empire, and of courſe will appear very conſo- to the natives of Ireland, whom he has been hugging boſom for twelve months paſt. Pray, where lies the nce betwixt an Engliſhman and Scotchman, ſince the of the two nations? or, ſhould any diſtinction be made t the ſouthern and northern parts of the iſland, more etwixt the inhabitants of two conterminous ſhires? round occupied by the reviewer, in fact, permits the to be condemned, without hearing more evidence than is contained in the title-page.

at many Engliſhmen might have been found, qualified e and report faithfully concerning the huſbandry of hire, cannot be queſtioned; but it is equally certain, one could be procured who would undertake the office. Weſt Riding was the laſt diſtrict for which ſurveyors appointed, and it ſtood a blank in the liſt, till the gen- originally nominated for Northumberland, reſigned ounty, and undertook an office, from which they have nothing but a great deal of perſonal trouble, and not petulant abuſe. Whether it was owing to the terms d by the Board of Agriculture, or to the extenſiveneſs diſtrict, and the complicated ſtate of huſbandry prac- that occaſioned a demur, it is not my buſineſs to en- ; but that every gentleman, to whom the taſk of ſur- was offered, declined ſuch an honour, (for profit was the queſtion) may be ſafely affirmed. If I am wrong, hn Sinclair, and many others have it in their power to me.

ring cleared up the point, viz. why *Scotiſh ſurveyors* appointed to examine an *Engliſh county*, I ſhall now ed to *review* what is ſaid by the *Reviewer*, concerning ſult of their examination. If the candid reader expects he *Engliſh* critic, (I cannot call him a Britiſh one, for is already aſſigned) animadverts upon the leading and al topics of the report, he will be miſerably diſappointed. thing mentioned concerning leaſes, covenants, im- ments, and the ſtate of the country remains unnoticed, a few ſolitary paſſages, relative to the poor-laws, and

the taking of tithes in kind, are conſidered as ſufficient evidence for pronouncing the moſt damnation.

But to proceed to particulars: After a bitter exordium, wherein the general plan of the county reports is ſeverely cenſured, and quotations of two or three (a ſcheme well calculated, no doubt, to throw light on the buſineſs) the critic firſt notices what is ſaid by the ſurveyors concerning the public burthens that affect the tenant, or, in other words, ſuch as are neceſſary to be inveſtigated, before the article of rent can, with the ſmalleſt degree of correctneſs, be aſcertained. The original paſſage evidently carries no other meaning, than that the ſum received by the landlord is not a criterion by which the rent of land can be eſtimated; and that, without aſcertaining the amount of the public burdens, no preciſe opinion could be given upon the ſubject. What is ſaid, however, is charitably conſidered as an excitement to diſcontent, though it might, with equal juſtice, have been alleged, that the mentioning ſuch a thing as rent at all, proceeded from a ſimilar motive. I ſhall extract what the ſurveyors ſay upon this head, leaving the public to determine the degree of candour poſſeſſed by the critic, when he examined this Section.

"It is difficult for us to ſay what may be the real rent of land. We could not, with propriety, puſh the farmer upon this point, when he was ignorant what uſe we were to make of his anſwer; and even where we got ſufficient information of what was paid the landlord, we found there was a long train of public burdens, over and above, which could not be eaſily aſcertained. There is, in the firſt place, the land-tax, which is uniformly paid by the tenant, and generally amounts to 1s. per pound upon the real rent. 2dly, The tithes, which are levied in ſo many various ways, that it is impoſſible to ſay what proportion they bear to the pound rent, much depending upon the actual ſtate of the farm, and not a little upon the character and diſpoſition of the drawer. Upon arable lands, where they are annually valued, the payment of money may be from 5s. to 8s. per acre, in ſome caſes more. 3dly, The roads, the expence of which to the tenant is about 7l. per cent. upon the rent: 4thly, The poor rates, for which no fixed ſum can be ſet down. The loweſt we heard of was 18d. in the pound; and the higheſt 8s.; but, from the very nature of the tax, they are continually fluctuating, and, ſince our ſurvey was made, they are greatly increaſed. 5thly, The church and conſtable's dues, which are about 1s. in the pound. — From all theſe things it may be ſup-

[illegible] that [illegible] is the sums payable by the farmer to the church, th[illegible] l the poor, are nearly as great as the nominal rent paid to the landlord."

That tithes are a public burden, will be evident to the [illegible] capacity, though the critic says that "an Irishman might perhaps be privileged for placing these among the tenant's public burdens, but not so a man of any other country." If they are not a public burden, affecting land, I should be glad to know what they are? They were originally imposed upon the proprietors of lands for the support of religion; and if "through the lapse of time, and the waste of ages," they have, in numerous instances, been perverted to other purposes, still they are collected in virtue of the original grant or appropriation. It is a matter of no importance, that a very considerable proportion of them are *now* become private property, seeing that they were originally destined for a public purpose. If the proprietor of an estate chose to bestow the tithes thereof upon an abbacy or monastery, and Henry VIII. in his sovereign pleasure, thought fit to suppress that abbacy or monastery, and to gift away the revenues to one or other of his favourites, does that alter the question? No; it only proves, that Henry VIII. did an unwarrantable deed; for, if the public good required the suppression of the abbacy or monastery, the tithes granted for its support ought to have reverted to the original proprietors, as the public establishment, for whose sake they were bestowed, was abolished and removed. If this had been done, they would then, in strict terms, have become private property; but as they were gifted away to others (right or wrong, I do not presume to enquire) they are still collected in virtue of the original destination, and consequently cannot be considered in any other light than as a public burden, though the religious houses, for whose benefit they were bestowed, have long ceased to exist.

Without entering upon the merits of Sir John Sinclair's letter to the surveyors, cautioning them to avoid discussing the expediency of tithes, which, as might be easily shown, cuts two ways; it is sufficient to say, that the critic's opinion seems to have been formed more from what was stated in the quarto edition, than from any thing contained in the copy then before him. He says, "so inveterate however is the enmity of these men against tithes, which they never paid, that they cannot forbear to inveigh against them upon every oc-

caſion that can be found." I lay any ſtreſs upon the circumſtance, that not ſ es of the Survey are occupied upon this ſubject, though it is not the beſt proof of the critic's accuracy; but I muſt expreſs my ſurpriſe how he could for a moment ſuppoſe they ought to have preſerved ſilence, merely ſe they were not perſonally intereſted. The very ſame ſon might be urged againſt every opinion they have offered; and, unleſs the critic can prove, that his intereſt would be leſſened by an abolition or commutation, his advocating the cauſe may be deemed as an inſtance of impertinence, even upon his own principles. Be this as it may, I conſider the conduct of the ſurveyors, in yielding ſo far to Sir John Sinclair, as to decline inveſtigating the expediency of this tax, burden, property, or call it what you will, as the moſt reprehenſible part of their behaviour. I believe it proceeded from perſonal reſpect to the worthy Baronet, who, I ſuppoſe, had pledged himſelf to procure their ſilence.

The ſubject is again touched upon in another part of the review, when the breaking up of old graſs-land is under conſideration. The ſurveyors ſay, p. 115. "Before any of theſe rich fields can be broke up, the tithe-ſyſtem muſt undergo a change, as it would be a notable affair for the tithe-holder to have a *tenth* of the weighty crops they would produce. From reſpectable authority we learned, that the payment of tithes were, in a great meaſure, the cauſe of laying theſe fields totally in graſs, and that this tax continues to operate as a prohibition againſt breaking them up."—Upon this paſſage the critic obſerves, "The more weighty are the crops with mere breaking up, the more reaſon has the farmer to be ſatisfied with the payment of tithes, that is, of his neighbour's lawful demand." Softly, my dear ſir, it is the intereſt of another party that is here concerned, whom you totally forget, and that is, the proprietor. If he cannot get a great deal more rent for ſuch land, in conſequence of aration being introduced, than when it remained in graſs, it would be bad mangement to expoſe it to waſte and deterioration. Take the rent of the old paſtures, ſuch as are alluded to, at 50s. per acre, and the crop at 50 buſhels, the tithe thereof would amount, at a moderate computation, to 30s. which, added to the graſs-rent, would make 4l. Sterling per acre, leaving little room for further augmentation. The proprietors therefore prudently ſuffer the land to continue in graſs;

[illegible] expoſe it to the hazard of being injured by the
ſh, when the chief benefits would be gained by a ſpecies
ſons who are neither owners nor poſſeſſors of land, nor
any ſhare of the expence attending the cultivation of it.
he *road-tax* (ſtatute-labour) is ſtated to be 7l. per cent.
the rent, and, if paid according to law, it muſt now be
though the reviewer ſays, "it ſeldom exceeds 2½ per
and cannot exceed 5l. per cent." By law, it is fix days
of a team of 3 horſes and 2 able ſervants, for every
rent, with an aſſeſſment of 6d. per pound upon the rent,
ore, if the juſtices ſee neceſſary. Now, let any perſon,
uainted with the value of labour, ſay, whether theſe will
mt to 7l. per cent. or not. Reviewers are not the beſt
s for computing the value of labour; indeed it would
reaſonable in the extreme to expect accuracy from ſuch
le, upon ſubjects with which they, of courſe, muſt be
ly unacquainted.

he obſervations made upon the *poor-laws* next come un-
he critic's animadverſions, and certainly, if ſcurrility be
commodity he deals in, a good deal of it is here vended.
defect of thoſe laws has been ſo long and ſo univer-
acknowledged, that it is truly wonderful he ſhould feel
re, when the grievances of the preſent ſyſtem are ſlight-
mmented upon. Very few people will be found that
theſe laws to be perpetuated. They were perhaps con-
ted upon ſalutary principles, when firſt enacted, but the
of ſociety is now ſo materially altered, that the wiſeſt
ons in the nation agree that a change is neceſſary, though
may differ reſpecting the amendments that are required.
have looked into the ſurvey, and perceive that the lead-
ſentiment of the author, upon that branch of the work,
hat the burden of ſupporting the poor ought to be ſuſ-
d by all ranks, in direct proportion to their abilities.
is ſuch a juſt and equitable principle, that I can hardly
ceive what kind of arguments could be offered againſt it.
reviewer gives none. He indulges himſelf in petulant-
arping againſt ſome inſtances of their adminiſtration,
given upon the author's own authority, but from the in-
nation of an intelligent and reſpectable gentleman in the
rict. The poor laws of England are ſo complicated, that
legal practitioners hardly underſtand them; therefore,
hat is ſtated reſpecting their general adminiſtration was
ny part defective, the error might have been pointed out

in decent terms, as candour might have ſuggeſted that a falſhure in facts might happen, without blame being attachable. The following quotation from Mr Pitt's celebrated ſpeech, February 16th 1796, upon this very ſubject, will effectually ſhew that the author has great authority upon his ſide, when he pronounced the Engliſh ſyſtem of poor-laws to be incompetent with the original object, and inconſiſtent with the preſent ſtate of ſociety in that country.—

"That the poors laws of this country, however wiſe in their original conſtitution, had contributed to prevent the circulation of labour, and to ſubſtitute a ſyſtem of complicated abuſes in room of the evils which they humanely meant to redreſs, and, by engrafting upon a defective plan defective remedies, they produced noting but confuſion and diſorder. The laws of ſettlement prevented the workman from going to that market, where he could diſpoſe of his induſtry to the greateſt advantage, and the capitaliſt from employing the perſon who was beſt qualified to procure him the beſt returns for his advances. Theſe laws had at once increaſed the burden of the poor, and taken from the collective reſources of the ſtate, to ſupply wants which their operation had occaſioned, and to alleviate a poverty which they tended to perpetuate."

If the above extract is compared with the general ſpirit of the ſection on the poor-laws, it will appear that the difference of ſentiment, if any, is but ſmall; and yet the critic ſtigmatiſes the ſurvey, as "calculated to produce in the minds of farmers, a rancorous hatred of the exiſting laws." I believe the author would diſdain to ſhelter himſelf behind Mr Pitt, or any other authority; but when people of talents and information hold ſimilar opinions, it is a proof that he is not ſo far miſtaken as the reviewer attempts to make the public believe.

I have juſt another obſervation to offer upon this intemperate review. In the concluding paragraph, it is ſaid: "If the people in England, in general, and farmers in particular, are not excited to a ſtrong and active hatred of land-owners, for refuſing to grant long leaſes; of the clergy and impropriators, for receiving what is due to them by the laws of their country; and of the Legiſlature itſelf, for not removing all inconveniences reſpecting the poor; which, however, they have inceſſantly ſtudied to remove;—aſſuredly it will not be for want of encouragement from the ſurveyors employed by the Board of Agriculture." It is certainly a ſtrange miſap-

prehenſion of terms, to ſay that the farmers are excited to hate their landlords, becauſe the utility of leaſes is inſiſted upon, and ſome other defects pointed out in the agricultural ſyſtem. Does the critic know, that the intereſt of the one is as much promoted by granting leaſes as that of the other, and that no eſtate whatever can be let at full value, unleſs the ſecurity of a leaſe is granted to the tenant? It is a ſurpriſing circumſtance, that while no attempt is made to refute the doctrines inculcated by the author, his concluſions are condemned in the moſt unqualified terms.

Having already taken up ſo much of your room, I can only juſt glance at what is ſtated by the Monthly Reviewer concerning the ſame work.

This gentleman has generally no objection to clear the ground of *quickens*, and has frequently committed himſelf when reviewing ſimilar publications. He is friendly to leaſes, an enemy to tythes, and in ſhort, holds opinions upon rural reform, very like thoſe which run through the Weſt York Survey. At this time, however, he drops his principles in the back ground, and comes forward to join in the attack againſt that unpopular work.

He accuſes the ſurveyors of "being influenced by abſurd timidity," becauſe they did not think proper to ſtate the annual value of the Duke of Norfolk and Lord Fitzwilliam's eſtates; but I am perſuaded, that if he was acquainted with them, he would confeſs that "timidity," is not one of the ſins that moſt eaſily beſet them. Perhaps the author did not know the rentals of theſe Noblemen, therefore attempted to get off with an excuſe. Be that as it may, the value of an individual's eſtate is unimportant in ſuch a work, further than to gratify curioſity. Many ſections were marked in the Board's *improved* plan, to which the attention of the ſurveyors was not originally directed, and they were neceſſitated to fill them up in the beſt manner they could.

"The Survey," it is ſaid, "was confeſſedly made in haſte," merely becauſe five weeks were employed upon the buſineſs. Does the reviewer know any other diſtrict, Lincoln excepted, where ſo much time was devoted to the gathering of materials; or did he examine the route taken, or the abſtract of the intelligence procured, when he formed this opinion? It is not the number of days and weeks, that were ſpent, but the manner in which they were employed, that ought to be conſidered; and, with common diligence, the period occupied is ſufficient to form a tolerable notion of the

principles and practice of husbandry in any district; for it was not a minute detail of every man's system, but a general view of agriculture that was wanted. If hearsay evidence (I suppose he means the information transmitted to the surveyors, by gentlemen resident in the district) is not to be received, in what light are we to view the numerous books of travels with which the nation is deluged; for certainly the authors of them never personally witnessed many of the events they detail, nor visited every place which they describe. He adds, that the survey is "crude and indigested." If by *crude*, he means *imperfect*, then there is not a perfect survey yet printed, nor will such a one be executed upon the present plan, which embraces more objects than are in the power of one man to accomplish. If by *undigested*, he means *confused*, then he must give me leave to say, that, so far as respects arrangement and precision, this work will bear a comparison with most of its neighbours. In point of composition, it is more vulnerable, though I don't consider, that to be the test by which an agricultural publication is to be tried. The apology offered in the introduction, might in this respect have gone far to have satisfied every mind not resolutely bent upon finding fault.

"Distance from the press, and a crowd of other avocations prevented that correctness of composition, which is to be found in several works of the like nature. But perfection in composition is not to be expected from those engaged in the *practice* of rural science, nor will the want of it be laid to their charge as a crime. According to the reverend Mr Harte, "the plain "practical author pays his little contingent to the republic of "knowledge with a bit of unstamped real bullion; whilst the "vain glorious man of science throws an heap of glittering "counters, which are gold to the eye, but lead to the touch-"stone."

I shall conclude these strictures with an extract of a letter from a friend who was employed under the Board of Agriculture in the great work of surveying the kingdom. "The London periodical publications," says he, "in general are conducted by persons who have a very superficial knowledge of gricultural subjects, and in whose reviews I have often enaced the most absurd remarks—they have no idea that any tiing good can com from the *other side Jordan*, and every

practice contrary to Norfolk, Kent, Eſſex, or Hertfordſhire, is with them conſidered as downright *hereſy; ſuch hereticks as you* and *I*, who *dare to think for ourſelves*, and make known our own ſentiments, are no doubt thought deſerving of being converted into bonefires;—however I hope we are both the diſciples of truth, which may for a time be obſcured or kept under by prejudice and ignorance, but in the end will prevail, though, in the meantime, we have to contend with the *Beaſts at Epheſus*.

I am, Yours, &c.

VERUS.

FOR THE FARMER'S MAGAZINE.

Review of the Comparative Statement of the expence of Oxen and Horſes for Farm-labour, given in the Northumberland Survey, Vide p. 428. VOL. I.

As the authors of the Northumberland Survey, reviewed in your fourth number, appear to have very much undervalued the expence of keep, both of oxen and horſes, I have ſent you an attempt at a new eſtimate of both, on what ſeem to me truer data.

Expence of an Ox for one year.

Summering on graſs, being the cuſtomary payment for a cow, - - - -				L.	3	10 0
½ of an acre of tares during ſummer, at 5l. -					1	5 0
Wintering, on ſtraw - -	L.	1	10 0			
½ an acre of good turnips, at 5l. -		2	10 0			
		4	0 0			
If on hay, 200 days, at 8d. -		6	13 4			
Half of this, as the average expence,		10	13 4	is	5	6 8
Intereſt, harneſs, ſhoeing, as per Survey, -					1	5 0
Total -					11	6 8
Deduct ſuppoſed increaſed value of the ox -					1	6 8
Gives the annual expence of one work ox -					10	0 0

Hence, the 1ſt year, with 8 oxen, will coſt	L. 80	0 0
The 2d and 3d years, 6	120	0 0
Expence of three years,	L. 200	0 0
Average for one year	L. 66	13 4
To which muſt be added the expence of a driver, which I cannot eſtimate, including wages and victuals, below	14	6 8
Gives the total annual charge of each ox plough	L. 81	0 0

Expence of a Horſe for one year.

Summering on graſs, 165 days, at 6d	L. 4	2 6
Vetches or tares, as for the ox	3	0
Straw for half the winter, at the ſame rate with the ox	0	15 0
Hay half the winter, or 100 days, at 8d.	3	6 8
Oats, 70 buſhels, at 2s. 3d.	7	17 6
Harneſs, ſhoeing, and annuity, as per ſurvey	3	6 0
Annual expence of one horſe	L. 26	11 8

Hence the annual expence of a two-horſe plough will be 41l. 3s. 4d. leaving a balance in favour of horſes for farm labour, and againſt the uſe of oxen, of 39l. 16s 8d. for each plough. The ploughman is not charged in either, being the ſame in both.

In the ſtrongeſt ſoil, the improved *ſwing-plough* can never require more than three horſes, and that only for once ploughing, in particular ſeaſons and ſituations. Suppoſe three required for half the year, and with a driver, this would add 17l. 0s. 8d. to the expence of each horſe plough in ſuch ſtiff ſoils, ſtill leaving a balance of 22l. 7s. 6d. againſt each ox team.

Extending this compariſon, with the authors of the ſurvey, who ſuppoſe 5000 ploughs in Northumberland, and allowing Great Britain and Ireland to contain forty times the extent of tillage land in Northumberland, the two-horſe ploughs give a difference of nearly ſix millions Sterling annually. Suppoſing half the ploughs to have three horſes, the difference would be nearly five millions. In ſuch years of ſcarcity, the difference would be more than double.

It muſt, however, be obſerved, that the above compariſon is made with the improved ſwing-plough, and will by no means hold good with the extravagant horſe-teams ſo prevalent in the ſouth, which are more expenſive even than ox-teams.

uld go a great way towards leſſening the danger of fu-
cities, to deviſe a means of introducing the ſwing-plough
lly into practice. Perhaps a tax increaſing annually,
ploughs drawn by more than two, or at moſt three,
ould anſwer the purpoſe. A ſimilar tax on boats con-
of hewn timber, very ſpeedily introduced the ſaw into

cond calculation reſpecting the value of produce, by
-labour, comes much nearer mine, than the direct eſ-
f expence. Had the authors allowed nearer the aver-
e, the difference would not have been very material.

lculate directly, the loſs on each ox team,	L. 8	3	0
of loſs of produce by each, is -	27	13	0
ulation with two-horſe ploughs, -	39	16	8
ith three horſes, - -	22	7	6
age of the whole is - -	24	10	7½
ving out the firſt, as greatly too low, the			
e will be almoſt - -	30	0	0

the whole, the loſs to the farmer, in the firſt inſtance,
: under 25l. annually for each ox-plough team*. And
: worthy of remark, that the whole of this loſs muſt
y fall upon the landlord and the community.

Rrrr.

HE CONDUCTORS OF THE FARMER'S MAGAZINE.

f the Form of a Leaſe and cultivation-Table given in mber, p. 12.

TLEMEN,

ility of reſtrictive covenants has been queſtioned by perienced agriculturiſts, while their neceſſity is ged by various authors, chiefly of the deſcription ngland "*land-taſters*," whoſe intereſt in all pro-

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mbly recommend the above obſervations, together with the com-
ements between horſes and oxen, for the purpoſe of the draught,
the Northumberland ſurvey, to the conſideration of thoſe mem-
:giſlature who ſupported the bill for taxing farm-horſes, ſolely
ould operate as a premium in favour of oxen.

M.

bability would be leſſened by ſimplifying the tenure whereby land is generally poſſeſſed. Some of theſe gentlemen affect to conſider the tenant as the moſt unfit perſon in the world for arranging the outlines of farm-management, therefore, very kindly tie him down to follow out rules which they, in their ſuperior wiſdom, think moſt ſuitable for the cultivation of the land temporarily entruſted to his care, otherwiſe, they ſagaciouſly conclude that he will not only ruin himſelf, but alſo injure the intereſt of the proprietor.

Practical people, or in other words, thoſe who are acquainted with the minutiae of huſbandry, and the difficulty of adhering to a ſtrict rotation in this variable climate, uſually view reſtrictive covenants in a different light. They are ſatisfied that no improvement whatever will be made in conſequence of their impoſition, unleſs they tend to promote the tenant's intereſt; and that, if he is endued with proper qualifications, he would follow out a judicious ſyſtem of cultivation, whether rules are preſcribed to him or not. The fact is, that the intereſt of the public, the proprietor and the tenant, are one and the ſame during four-fifths of a leaſe; the latter cannot hurt the ground or miſmanage it in a ſingle reſpect, without hurting himſelf in the firſt inſtance; and this principle will operate more forcibly than the moſt ingenious and beſt deviſed reſtrictions. Perhaps a few protecting clauſes are neceſſary during the laſt four years, ſo as the farm may not be thrown out of ſhape;—for a longer time they are altogether unneceſſary, ſerving only to fetter the tenant, without benefiting the proprietor; the truth of which may be aſcertained by an appeal to the condition of every diſtrict where diſcretionary management is permitted.

I am led to theſe reflections from peruſing in your laſt number a letter from Ayrſhire, ſigned J. W., accompanied with a Form of a Leaſe and Cultivation-Table, ſaid to be adapted to the Weſt country climate. Giving the writer full credit for his deſire to promote improvements, I muſt ſay that the meaſures recommended are totally improper for accompliſhing his object. The form of the leaſe ſeems entirely calculated to benefit one of the parties, or according to an ancient homely phraſe, "*the fat is all gathered to one ſide of the pot*," while every particular connected with the comfort and welfare of the man who is to bear the heat and burthen of the day, is altogether neglected. The table is equally defective—It requires the tenant to do what it is phyſically im-

ble in many caſes he can perform, conſequently fully
ants a preſumption, that, whatever are the qualifications
he writer, knowledge in practical huſbandry is none of
.

he firſt thing that ſtrikes me, in the form of the leaſe
mmended, is that every obligation on the proprietor's part,
eliver the houſes and fences upon the premiſſes in good
lition, are omitted, while the tenant is taken bound, not
to put them in proper repair, but alſo "to keep the
le houſes, dykes, fences, gates, and gate-ports, during the
, and leave the ſame in ſufficient tenantable and fencible
lition." If a tenant is ſo fooliſh as to agree to ſuch a
ſe, no doubt, as he makes his bed, he muſt lye down; but
handſome to include ſuch preſtations in a leaſe, charac-
ed, as adapted to promote improvements? The writer deſ-
s the Weſt country farmers, as "generally unacquainted
theoretical knowledge of farming," and thinks that,
m hard labour, ſtraitened circumſtances, and contracted
ndices, they only move and perform as they are impelled,
a machine or implement of huſbandry." He certainly
ed much dependance upon theſe things, or he would not
ventured to recommend ſuch an arbitrary and unjuſt
ſe. Does he intend to better their circumſtances or en-
ten their minds, by impoſing burthens ſimilar to what
raoh of old laid upon the Iſraelites? If a landlord re-
es a tenant to leave houſes and fences in a particular ſtate,
but fair and reaſonable they ſhould be delivered over to
, at his entry, in the like ſtate; otherwiſe a burthen is
oſed upon him, badly calculated "to rouſe his activity,
er his circumſtances, or make improvements popular."
: may be remarked, that two obligations of a very different
ire are contained in the clauſe here commented upon.
ficient and *tenantable*, according to common interpretation,
far from being of the ſame import. By the term *ſufficient*,
generally underſtood, that either a houſe or a fence muſt
n good condition in every reſpect; whereas, *tenantable* is
lained to mean no more than that the houſe muſt be ha-
ble, and the fence capable of keeping in a beaſt.

notice alſo, that the tenant is tied down to leave the whole
g made upon the premiſes in the laſt year of the leaſe,
the uſe of the proprietor, or the incoming tenant, with-
any allowance whatever being made him. If he enjoy-
he like benefit at his entry, the obligation would be fair
reaſonable; but as, in the caſe of houſes and fences,

the ſlighteſt mention is not made of this circumſtance. The writer is ſo much engroſſed by what he thinks the intereſt of his conſtituents, as to forget, in every reſpect, the object he had in view, viz. the extenſion of improvement; for certainly a depreſſed tenantry will never make a flouriſhing eſtate.

Perhaps the clauſe, permitting the landlord to exchange part of the land ſet, might be ſo operated upon, as to render a farm not worth the cultivating, and even what is ſaid reſpecting liberty of working minerals, &c without any limitation, upon paying ſurface-damages, might ſanction the tenant's ruin, upon the ſuppoſition that the proprietor was capriciouſly diſpoſed to haraſs him by ſuch proceedings. I am aware, that clauſes, ſimilar to thoſe now mentioned, are not uncommon in this country; but this is no proof of their utility. It has been well obſerved by Mr Donaldſon of Dundee, in his Account of Britiſh Huſbandry, that, unleſs the ſame freedom is given to farmers, as is enjoyed by merchants and manufacturers in the exerciſe of their buſineſs, it is needleſs to expect that improvements in rural ſcience will keep pace with thoſe in trade and commerce. The obſervation is juſt, though it is to be lamented that in practice it is ſo much neglected.

I hardly know what to ſay upon the clauſe binding the tenant not to 'overſtock the paſture graſs with cattle;' for, among the number of antiquated arbitrary leaſes of a neighbouring country, which I have examined, ſuch an obligation is rarely to be found. If a tenant does not know what ſtock his graſs can carry, he is certainly an unfit perſon to poſſeſs land. Beſides, there are few points upon which people differ more than in the ſtocking of graſs land: Indeed, when ſtock are upon the field, and a ſevere drought ſets in, what would otherwiſe be a very moderate number, often turns out a real overſtock. But what is the tenant to do in this caſe? He muſt either diſpoſe of his beſtial at ſuch prices as can be got, or take his hazard of better weather. In a word, this clauſe would lay the foundation of inceſſant diſpute. There can be no reaſon for prohibiting the keeping of ſheep and lambs, unleſs it is with a view of preſerving the hedges; and, under this ſuppoſition, a few dead thorns planted upon the inſide of the hedge would effectually prevent every degree of danger from theſe animals.

If prohibitions againſt aſſignees and tenants were not ſo common, I would have aſked your correſpondent, Why the

tenant ſhould be ſtrictly bound not to convey his poſſeſſion to a third perſon? It has been generally underſtood, even under the common clauſe, that a tenant, in the event of his affairs being in a diſordered ſtate, might appoint a perſon to manage his farm for behoof of his creditors, till their debts were paid up; nor can I ſee any thing that ought in juſtice or equity to prevent him, unleſs he has denuded himſelf of that liberty. The fact is, ſuch a meaſure has been often reſorted to with ſucceſs, and while the debtor has been ſaved from bankruptcy, and the creditors paid up, the intereſt of the landlord was not leſſened. Money laid out in the improvement of land is preciſely a mortgage upon the premiſſes for a limited time. If the original poſſeſſor is unable to keep poſſeſſion till the mortgage is redeemed, it is conformable with the ſtricteſt principles of juſtice, that he may tranſfer his right to another, exactly in the ſame manner as is cuſtomary with heritable bonds, or mortgages of any kind upon landed property.

I ſhall now ſay a few words upon the Cultivation-Table.

It appears that there is not one principle that runs through the whole of the table, except that two culmiferous crops are not to be taken in ſucceſſion. So far it is therefore right, as two white crops in general caſes is bad huſbandry, hurtful to the ground, conſequently injurious to the tenant. But to have made the table in any reſpect complete, (if we are to argue upon a proper table), the rotation of crops ought to have been uniform, *which is very practicable upon paper.* Now the number of diviſions in paſture is conſtantly altering; 1ſt year five diviſions are in paſture, 2d year only three, 3d year two, 6th year five again; and, in ſhort, the extent is varying every ſeaſon, which would occaſion the plough to be uſed more in one year than in another; therefore the tenant would have either too much or too little work, or be annually ſhifting his working ſtock, which is an inconvenience of great magnitude. The cutting the firſt crop of graſs for hay is alſo a reprehenſible practice, nor would the taking of wheat or barley, when the paſture is broken up, be an adviſeable meaſure. Oats, as a firſt crop, are always to be preferred. They are no doubt offered as an alternative to the tenant, though none are given him in other caſes where circumſtances more decidedly call for the exerciſe of diſcretion.

But the moſt palpable abſurdity in the whole table is to be found in the extent of ground required to be dunged, which manifeſts that your correſpondent is not an adept in practi-

cal huſbandry; as for inſtance, in the 17th year, two diviſions are to be laid down with dung, though only three diviſions were in corn the preceding year, which would not produce dung adequate to the covering three fourths of one diviſion, even at the moderate allowance of 14 double loads per acre. Suppoſe we include the dung to be made from the produce of the two diviſions, carrying fallow crops, ſtill a very great deficiency will remain. Beſides, how ridiculous is it to oblige the farmer to dung land, and not to ſpecify the quantity that is to be applied. Any extent of land *may be dunged*, but the manner in which it is to be done, is the principal point. Juſt the ſame obſervation may be offered upon every reſtrictive covenant. A tenant may be taken bound to fallow; but, unleſs the number of ploughings, harrowings, &c. are ſpecified, the obligation will be found nugatory, for it is not in the power of a third perſon to compel him to perform theſe operations in a proper manner. The fact is, a ſlight fallow, at leaſt upon ſome ſoils, often gives the beſt crop. The tenant may be reſtricted by covenants, and kept within a circle, but they will not cauſe him to make a ſingle ſubſtantial improvement, that he would not have done under a free and open leaſe, if he knew his own intereſt.

We have juſt one thing more to notice. The clauſe declaring a failure in performance to be an *ipſo facto irritancy* of the leaſe, is certainly badly calculated to promote improvements. Who would lay out money upon land, if a ſlight deviation from the cultivation-table (a circumſtance hardly to be avoided in precarious ſeaſons) were to ſubject the poſſeſſor to a ſummary removal?—I am

Yours, &c.
A PRACTICAL FARMER.

Another letter upon the ſame ſubject has been received from a worthy correſpondent to whom we have repeatedly been under great obligations. We extract the following paſſages from it.

"The Ayrſhire gentleman's thoughts on leaſes are of a different ſpirit from the reſt of your Magazine, and I am glad to find that ſome one of your correſpondents mean to animadvert upon them, as indeed their is great room and cauſe. The very propoſal of confining to a certain round of crops is to be reprobated, more particularly in the preſent caſe, when the leaſt alteration, however unavoidable, is to carry *loſs of the leaſe* along with it. But I do not mean to encroach on

correſpondent's province, by entering into a detail of ts follies, inconſiſtencies, and oppreſſive tendency. I juſt notice two prominent indications of tyranny a- g the clauſes of the leaſe. 1ſt, The poor negro of a nt (for farmer he is not underſtood to be) is to take the le houſes and fences in their preſent ſtate, (which for thing that appears on the face of the leaſe, may be fit nothing,) *and obliges* HIMSELF *to put them into proper re- , and to leave them at his removal in a ſufficient tenantable ition!* and what grand recompence has he for all this out- of money in building houſes, and encloſing of land to maſter, which, in his ſuppoſed feeble circumſtances, ld, a thouſand to one, run his noſe into the ground at very firſt? Why, (and it was ſhrewdly foreſeen by the er of the leaſe) in caſe he becomes bankrupt, his very *tors* are to be deprived of their ſhare of the improve- ts made at their own expence; the whole is to be lowed up in the capacious maw of the *maſter!* not a e to the poor white negro, nor to a creature who may countenanced him; as indeed they muſt have deſerved, heir ſimplicity in giving credit, in a caſe where it was ionſly engroſſed on ſtamped paper, that no creditor d have a claim to be reimburſed of any thing; for, by o- ſtrong reſtricting clauſes, the hypothec is to extend to, include all the maſter's claims. I wonder it is not cove- ed that the poor ſlave ſhould be liable to corporeal pu- ent, like to his black brethren in the Weſt Indies.

ne obſervation more, and I have done. The *Agricultu- Illuminati*, i. e. land-doctors, ſet always out on this *broad*, as they think, *ſure* ground, that the whole race of farmers nants, (or ſlaves if ye will) are declared enemies to land, lords, and every thing about land; they therefore very iſtently wiſh to ſee them bound hard in *fetters and in* ; and as this evil opinion, like all other bad notions, is derfully productive of bad concluſions, ſo the very means take to correct it, only tend to foſter and perpetuate the they wiſh to avoid.

PART III.

AGRICULTURAL INTELLIGENCE.

IF ſeaſonable aration, and a dry ſeed-bed, were circumſtances which inſured a good crop, we might ſafely prognoſticate that the two years of ſcarcity, with which this country has unhappily been viſited, will be ſucceeded by a year of the greateſt abundance. The ground has uniformly wrought well ſince laſt autumn. The wheat-ſeed was finiſhed in a huſbandman-like ſtile, and the young plants, almoſt in every caſe, have a promiſing, though not a forward, appearance. The ſpring grains have been equally fortunate. The ſoil was well made by froſt, and harrowed in an eaſy manner. The weather was favourable, neither too dry nor too wet, and permitted every operation to be executed with a degree of perfection utterly attainable laſt year under the moſt active management. While gratitude for this comfortable proſpect ſhould fill the minds of all, let it be remembered, that the after ſeaſon chiefly regulates the productiveneſs of the crop. If a temperate ſummer ſucceeds ſuch a favourable ſpring, there will be every cauſe to hope, that the public diſtreſſes will be conſiderably alleviated, though, from the exhauſted ſtate of the country, it cannot be expected that they will, in one year, be altogether removed.

From the large importation of foreign grain into every part of the kingdom, no real want has been hitherto felt, though prices, eſpecially for wheat, have exceeded thoſe of laſt year; but as the home grain, from the ſcarcity of fodder, will, this year, be ſooner threſhed out than commonly happens, a continuance of foreign ſupplies will be indiſpenſibly neceſſary till the new crop is harveſted. In ſeveral parts of Britain, the ſtack yards are nearly empty, and the ſtaff of life will, in a ſhort while, be found only in the hands of the corn-dealer.

The markets, for both fat and lean ſtock, have likewiſe rapidly advanced, and threaten to go equally high as laſt year.

s is owing to the ſtoppage of the diſtilleries, and the partial
ure of the turnip crop, which have produced a ſcarcity of fat
le and ſheep; while the deficiency of fodder occaſioned ſuch
nbers of half-fed beaſts to be ſlaughtered in the beginning of
ter, as renders lean ſtock difficult to be got, now when the
ſs ſeaſon is approaching.

The bill prohibiting the manufacturing of wheat into fine
ur, paſſed laſt ſeſſion of Parliament, commonly called the
Brown bread act," has been already repealed, and, in our o-
ion, the repeal was founded on cogent motives. We never
ld diſcern in what reſpect a buſhel of wheat could be conſi-
ed as containing a greater portion of nutritive ſubſtance when
nufactured in one way, than in another; though we acknow-
ge, that, by rendering the article unpalatable, a given quan-
r might thereby be made to ſupply the public conſumption
a longer time. This was perhaps the object of its ſupport-
, though, when a trial was made, the public were not ſatisfi-
with the meaſure. Beſides, it did not produce ſuch a re-
ction of the price of bread as was expected. In fact, fine
nples of wheat were enhanced in value by its operation, while
: inferior ſorts became a mere drug, as they were unfit to be
nufactured in the manner directed by the act. The trade
s thus thrown into confuſion, the public were univerſally diſ-
isfied, while no benefit whatever was derived from a mea-
e raſhly adopted, but prudently given up, when its non-utility
s aſcertained by the evidence of facts.

In thoſe times, when the foſtering hand of the Legiſlature
ght rather to be exerciſed in ſupporting and countenancing
riculture, it gives us pain to obſerve any ſtep taken to tax
produce of the ground in an indirect manner. We allude to
: bill for impoſing an additional duty on farm-horſes, which,
ied to the old duty, will levy a ſum from the farmers of North
itain, equal to one half of the whole land-tax. In fact, it is
t the ſame thing as if that tax had been raiſed to ſix ſhillings
the pound, inſtead of four; for, if the poſſeſſor is ſubjected
a burden, which he cannot tranſfer to the purchaſer of his
nmodities, it muſt, at the long run, fall to be deducted out of
: rent. Who ever heard of a government that taxed the

ſhuttle or the *hammer?* and yet theſe two implements might, with as much propriety, be taxed as the *farmer's horſe.* The farmer can no more transfer the burden to the conſumer, than was practicable in the caſe of the ſhop-tax; yet the inability of the ſhop-keeper was held to be a relevant argument when the tax was repealed.

The principles upon which this additional duty was ſupported, to wit, that it would encourage the employment of oxen in preference to horſes, will be found altogether unfounded and ineffective. Did the triple aſſeſſment of 1798 cauſe a ſingle ox to be uſed in farm-labour more than was formerly employed? Without inquiring whether theſe were only the *oſtenſible*, and not the *real* reaſons for enacting this tax, it may be added, that, if the tax was increaſed tenfold, a horſe would ſtill be the preferable animal for farm-labour, and the cheapeſt, both in a public and private point of view. Since the Revolution, till lately, it was the policy of this country to encourage the plough, by granting bounties upon the exportation of grain; but now, when the produce of the kingdom is confeſſedly unable to ſupply the conſumpt of the inhabitants, a burden is impoſed upon the agricultural intereſt, which, one year with another, will far exceed the ſums formerly paid by way of bounty or encouragement. We forbear to add more, the ſubject being ſo plain as to require no illuſtration.

Extracts from Original Correspondence.

AMERICA.

Extract of a Letter from a Gentleman at Philadelphia, dated December 26th 1800.

This is far from being a good farming country, the ſoil being generally very poor, and the crops much inferior to thoſe raiſed in Britain, while the expence of labour is ſo high as to render land of little value. The Dutch people are beſt qualified for agricultural affairs in this quarter, as they make their own cloaths, ſpend little or nothing, and are Jacks of all trades.

It is not unuſual for them to travel from 60 to 400 miles to market with their farm-produce in waggons. They bring proviſions along with them, make fires on the road for cooking their victuals, and, when in town, lodge in the waggons, while the horſes ſtand in the ſtreets. In ſhort, they don't expend a farthing when from home, but carry the whole money received for their commodities away with them; which is the only plan in this country, where labour is ſo dear, and produce, in ordinary ſeaſons, of comparatively ſmall value.

It is the opinion of many well informed men here, that if Britain was to ſtop trade with this country, graſs would grow in the ſtreets of Philadelphia, for no goods are uſed but what are of Britiſh manufacture; nor is it poſſible, while labour is ſo dear, that manufactures can be introduced. Indian corn is the uſual food, both of man and beaſt, which enables the people to export a conſiderable quantity of flour; but, as I ſaid before, the crops of grain are very trifling, and I have ſeen many thouſand acres which would ſcarcely return the ſeed.

Six fine calves were lately killed in this market, which coſt 90 dollars, beſides 10 dollars more for expence in bringing them here. They had ſucked 23 cows during 18 weeks, then on Indian corn and Timothy. Their weight was about 60 lb. per quarter, which was a rare thing, as veal in this country is worſe than I have ſeen it in any other place, being the colour of horſe fleſh, and generally ſold at half a dollar per quarter. The current prices of the neceſſaries of life, are, wheat 5s. rye 6s. oats 3s. barley 6s. to 7s. 6d. Indian corn 6s. beans 6s. all per buſhel; beef 4d. to 7d. veal 4d. to 10d. pork 6d. mutton 5d. to 12d. all per lb.; turkies weighing 8 lb. 4s. ducks 2s. to 3s. each, chickens 10d. and 12d.

The implements of huſbandry are bad; the plough generally uſed is called the *bar-ſhoe plough*, from having a bar of iron from the ſhare to the land-ſtilt, with a bolt through the bar into the beam. They have alſo another plough called the *chip plough*, much like the Rotheram plough, but worſe executed. An implement for cleaning corn land is alſo uſed, called the *hovel plough*, but it is not worth noticing.

The rate of labour in ſummer is a dollar per day, and a dram of ſpirits, which coſt 5½d, and for mowing an acre of graſs 1¼ dollar, with ſpirits, is paid. It is a hazardous buſineſs to raiſe crops of corn, if the farmers have not people under their command, for cutting them. There are numbers of acres of Indian corn ſtill unreaped for want of hands, which ought to have been bladed and toped in September; the fodder, when well preſerved, is fine, and beyond any hay. Planting ſeems to be the forte of this country, I mean tobacco, Indian corn, &c. From the ſeverity of the winter, ſheep cannot be profitably reared, as the keep in that time is generally more than

what they will bring in the ſpring. The fleece of wool is from 2 to 5 lb. quality tolerably fine; but, from the circumſtances ſtated, Britain is in no danger of being rivalled by this country, in the manufacture of woollens, for a long period. The cattle are generally of an uſeful ſort, ſomething like the Engliſh breed. Horſes are of a hardy nature, but not ſo ſtrong and heavy as in England. Indeed, the large breed could not ſubſiſt here during the hot ſummer months. As to the climate, there is neither ſpring nor fall, all winter or ſummer, either burning heat or piercing cold, which prevents all kind of farming and planting, from the 1ſt of January to April. The weight of barley is about 45 lb. and wheat 50 to 56 lb. per buſhel. The malt-liquor is commonly bad in quality, and the brewing buſineſs is conducted very improperly.

The better ſort of people in this country, are agreeable and well informed, but the lower ranks are rude and uncivilized, in the greateſt degree. They plume themſelves much upon their freedom and independence; but, in my opinion, it is the moſt dependent country in the world, for every comfortable article muſt come from other parts. Engliſhmen are called proud and overbearing, and are not loved in America; but this proceeds from envy; for, I conſider England to be as much pre-eminent over all other countries, as the head is over the body. The more a perſon reflects upon the ſtate of ſociety in different countries, the readier will he be to coincide with me in this ſentiment.

☞ *We ſuſpect our correſpondent has fallen into an error reſpecting the prices of grain; for, in another part of his letter, he ſtates the dollar at 7s. 6d. which is a proof that Sterling money is not meant.*

SCOTLAND.

Extract of a Letter from a Gentleman in Aberdeenſhire, March 9th.

The mild winter has been very favourable, both for ploughing and for employing day-labourers. I have felt it to be my duty to give employment to as many as I could, of that uſeful claſs of men, who were in want of bread, and too high-ſpirited to receive charity; and being long ſince ſatisfied, that it was impoſſible to eſtabliſh liberty and equality among men, or, indeed, among any ſpecies of animals, I have been attempting, as far as I could, to eſtabliſh it among vegetables. With this view, I ſet my labourers to work on a field of *four* Scotch, or a little more than five Engliſh acres. The ſoil was in ge-

a light loam; and the whole field had borne a crop of laſt ſeaſon, after lying ſome years in ſown graſs. But per part had been taken out of moor about 15 years ago, of it as early as 1779) and was covered, at an average, nly five inches of ſoil, in many places not above three s while the lower part was old in field or croft land, at linm, 20 inches; and in the hollow between the old , now levelled, not leſs than 2 feet 4 inches deep. In rmer part of the field, owing to the very dry ſeaſon, h the ground was clean and in good order, I had not 3 f oats per acre. On the latter I had a very good crop, gh, in moiſt ſeaſons, the corn on that part was apt to owing to the great depth of the ſoil. I have now ed about three acres, both of the very deep and the very il, and have left out one acre of the croft land, on one the field, which is of a moderate depth, for the opera- the plough. While the labourers in the lower part of ld were aſſiſting my ſervants in filling into carts the ſu- undant ſoil, leaving only a depth of about 14 inches, in the upper part were employed in piercing with a mat- (provincially called picking) the ſubſoil, or hard tilly el; and, (after the carted ſoil was poured upon the thus picked or pierced,) in levelling the cart heaps, and owing above them the thin ſoil which had been both d and limed ſome years ago, and was in a ſtate of vege- . For I conſidered it as a matter of importance, that ad earth ſhould not be laid above the ground, though ould have leſſened the expence. In accompliſhing this tion in the vegetable kingdom, I have completely got *thoſe deſpots called large ſtones*, whoſe tyranny over my ds had been of longer ſtanding than the race of Capet, n of Charlemagne, and which had broken many a plough induſtrious farmer; and, by green crops and fallowing, greatly humbled, and this year hope to extirpate thoſe *rats called weeds*, which had often choaked my crops, njured both the liberty and the fruitfulneſs of my ſoil. in Engliſh, my ground will be free both of ſtones and , and is now worth more than double rent. The me- diſtance from which the deep ſoil was driven to the thin f my field, was 80 yards, the field being nearly 180 yards gth, of which the very deep ſoil occupied the lower- 40 yards. The whole expence, as nearly as could be ated, was about 6l. per acre, independent of the value ne and dung, which muſt this ſeaſon be laid upon the

But, beſides the pleaſure of giving bread to eight or oor families in the winter months of a calamitous year, ich they could find no employment, I have got my whole leared of ſtones, and, inſtead of the former inequality of

ſoil, it is now at the medium depth of from twelve to four inches.

As I intend to devote this field, for the enſuing ſummer the purpoſe of experiments in agriculture, it may be prope mention what crops I propoſe to raiſe on it; and I ſhall much indebted to you, or to any of your intelligent neighbo for any information that can render my experiments ei more ſucceſsful or more generally uſeful. I propoſe to pla row of potatoes in the hollows between the trenches, which a Scotch ell, or 3 one-tenth feet diſtant, and to draw the e over the young plants when they firſt appear, and gradu to the ſtems when they require it. Between theſe rows I to ſow or plant carrots, parſnips, turnips, ruta-baga, roo ſcarcity, ſalſafy (tragopogon porrifolium) and different kin beet and cabbages. My ground is in ſuch a ſtate, as that h hoeing is unneceſſary. I ſhall now ſtate my reaſons for ma theſe experiments, where I aim at ſomething more than mere quantity of theſe different crops.

It has long been my opinion, that, both for preventing danger of a ſcarcity and the uſe of foreign or ſmuggled ſp by having a great ſupply of vegetables fit either for hu food or for diſtillation, the rectifiers ſtill ſhould be ſupp principally from green crops, and that no more malt, or in any other kind of grain, except in plentiful years, ſhoul uſed in diſtillation, than what was neceſſary for properly menting the waſh. If my experiments ſucceed, if the ſca ſhall be removed by a plentiful crop this year, and if I ob permiſſion to diſtil all of theſe different kinds of roots, wh find to be fit for diſtilling, I ſhall be able to determine p accurately their different comparative values, and alſo quality of the different kinds of ſpirits, which can be diſ from any one of them, or from a combination of two, thr more kinds of theſe roots. I have diſtilled both carrots potatoes with ſucceſs, under the authority of the late Com tee of the Houſe of Commons, on the Scotch diſtillery. rots, without being rectified, make an excellent ſpirit on t twice diſtilled; potatoes alſo make a pure ardent ſpirit, w is much improved by a third diſtillation. Turnips ma coarſe ſpirit, when diſtilled by themſelves; but I am not pared to ſay whether they may not, when combined with roots, produce a ſpirit that is both wholeſome and wel voured. Sugar has been made with great advantage from ſpecies of beet: and it is highly probable, that ardent ſ can be made from *mangel worſel*, and all the ſpecies of beet tribe.

If I do not receive permiſſion to diſtil them, or if the crop ſhall be ſuch as renders them neceſſary for the foo

man, I ſhall in either caſe be ſatisfied that I have made the experiments, and have given employment to ſome induſtrious people, at a time when work was ſo ſcarce, and proviſions ſo dear.

Allow me now to call your attention, and that of the intelligent landed gentlemen and farmers, among whom your magazine is circulated, to this plan of giving ſtaple to thin ſoil, and reducing to a moderate depth the ground on which corn is apt to lodge, from its being too deep and of a looſe texture.

With all the advantages of the plough, it muſt be remembered, that in a hilly country like Scotland, the ſoil of the higher part of the lands is, notwithſtanding the greateſt care of the ploughman, and the moſt judicious method of conducting the poſition of the ridges, gradually carried away to the lower parts of a field: And, along with many recommendations of liming or marling ground, it is well known that the firſt liming, or firſt improvement by marle, is the moſt productive; becauſe, after the ſoil is full of calcareous matter, a ſecond operation by lime or marle cannot be ſucceſsful. In the courſe of 20 years, it cannot be a great expence to give a complete trenching to a ſloping field, and, by carrying ſome of the deep ſoil to the upper parts, to render the whole of a moderate depth; yet the advantages of this are very great. New ſoil is brought up by the trenching, and lime or marle may be applied with uncommon ſucceſs. The ſub-ſoil is looſened with the pick or mattock, which will be of great ſervice for many years on a hard tilly bed; and the arable grounds ripen *at the ſame time*, when of equal thickneſs of ſoil. Nor ſhould it paſs unnoticed, that when a patch of moor or barren land lies cloſe by a deep field, or very near a thick end ridge, a conſiderable quantity of ſuch poor ſoil will be much enriched by covering it a few inches with the ſoil of old in-field or croft-land, and then mixing the whole by the plough. By this means, our arable lands may be rendered more productive, and increaſed both in their extent and value; at the ſame time, a benevolent man can give employment, in the winter months, to ſeveral honeſt and induſtrious day-labourers.

I muſt obſerve, however, that the operation of thickening poor land cannot, with advantage, be carried much farther than to 100 yards, at a medium diſtance from the deeper ſoil. The difference between the expence of this and of common trenching with the ſpade and mattock, conſiſts in the following articles: 1ſt, The filling the earth into a cart, inſtead of throwing it forward into the trench. 2dly, Aſſiſting to empty the cart and levelling the cart heaps. And, 3dly, which is the principal expence, The labour of a man and two horſes in carrying the ſoil to the thinner part of the field. When this diſtance

is conſiderable, two men and four horſes muſt be employed. From the experience which I have had, I can ſay, that the medium diſtance ſhould not exceed 100, nor the greateſt 200 yards, except where a farmer has two or more carts, and a little ſpare time. But I can atteſt, that the advantages of equalizing ſoil are very great, as I had the cleareſt evidence of this in 1796.

That year I employed a day-labourer to trench a ſmall feu which I have near Aberdeen. The quantity of ground was only 62 falls 14 ells, wanting 1 fall and 22 ells of four ſquare chains, or two-fifths of an acre. The lower part of the ſoil was nearly two feet deep; a hillock in the middle, ſhaped like a ridge, was, in ſome places, not more than two inches. The expence of trenching the whole, and of thickening the barren patch, was 48s.; and that of dunging and ſowing turnip, including ploughing, was 2 guineas. I ſold the turnips for 4l. 17s. or at the rate of 12l. 7s. 6d. per acre. Next year I raiſed 6 bolls and one peck of Aberdeen corn-meaſure, or 40 Wincheſter buſhels and 1 peck of excellent bear; or at the rate of 13 quarters, or 103½ buſhels per Scots acre. I cleared above 6 guineas from my bear, from the very high price of bear meal; and I let the clover the third year for 4l. 17s. the ſame rate with the turnips. It therefore does not admit of a doubt with me, that, where ground is valuable, in the neighbourhood of towns, that land will pay the expence of trenching and thickening the ſhallow parts of the ſoil. Whether it ſhall repay my expences in the country, and about 14 miles diſtance from a ſea-port, I do not aſſert; but, when my experiments are finiſhed, I ſhall faithfully relate their ſucceſs: at preſent I do not deſpond.

I would now mention a ſet of experiments which I made on the boulting of barley or bear in a flour mill in 1795, and 1796, and in 1800, and in the preſent year.

The firſt experiment was made on the old bear of crop 1794; and from it I obtained 36 pecks of meal or common barley flour, from the boll of bear, Aberdeen meaſure. The quantity I ſent was only 12 ſtones Dutch, or 210 lib. Engliſh, and meaſured exactly half an Engliſh quarter, or nine pecks and 2 lippies and a half of Aberdeen corn meaſure. It was firſt ſhealed on the barley mill, then ground and put through a 16 ſhilling cloth, marked No. 400.; it produced nearly 21 pecks and a half, meal weight, or 187 lb. Engliſh, of common barley flour, and 16 lb. of bran, 4 lb. of huſks from the ſhealing, and 3 lb. loſt or dried up in grinding and boulting.

The ſecond experiment made with the ſame bear produced 17 pecks nearly of barley meal, boulted through the cloth, No. 180, a bran cloth, or half guinea cloth.

it 6 firlots of bear, equal to 10 Wincheſter buſhels, ng nearly 532 lb. and a half Engliſh, or 30 ſtones 6 lb. . It was put through the bran cloth, after grinding, oduced 483 lb. Engliſh of barley meal, 3 lb. and a half , and 40 lb. and a half of bran; loſt in grinding only 5 h pounds out of 532 and a half.

rder to try how much barley-flour, equal to the fineſt flour, could be made from the half of this quantity, . was put through the fineſt boulting cloth, a 23 ſhilling No. 490; the produce was 112 lb. 10 oz. Engliſh, or 1 id 10 oz. nearly 13 pecks meal weight, and 124 lb of he millers call ſharps. Theſe ſharps were ground a ſe- ime, and boulted a third time, and the produce was 46 lb. nd flour of barley, (boulted however on the fineſt cloth) ere remained in the cloths 79 lb. of pollard, and above f tails. From this experiment, I ſaw there was a great f bear, in boulting it twice through a fine cloth, as the l and tails were only fit for poultry.

third experiment was made with half a boll of new dried in the midſt of a heap of dry corn, or kiln-dried When dried in this manner, an half boll of dried (about s and a half of undried) bear weighed 160 lb. Engliſh. boulted as in the preceding caſe; and produced of the flour 71 lb. or half a boll and 1 lb. but, after grinding rps, I took them home and ſifted them with a common eve, they produced 7 pecks of meal and 1 peck of ſids. eal reſembled that which is made on a meal mill. Find- s meal much better than I expected, I reſolved to make r experiment on a different plan.

ighed out 54 ſtones Dutch, which I found to be almoſt 3 Aberdeen bolls, or 20 Engliſh Wincheſter buſhels; lried on the kiln, it had loſt 4 ſtones of its weight, and d only 50 ſtones Dutch, or 75 lb. Engliſh. Half of antity, or 437 lb. and a half neat, was put through the ling cloth; it yielded 369 lb. or nearly 42 pecks and a neal weight, from the 6 firlots of bear. This was ſold ence halfpenny per peck, and was at leaſt a halfpenny bet- n any meal that can be made on a common meal mill. her half, or 437 lb. and a half neat, was firſt boulted h the fineſt cloth the 23 ſhilling cloth, and yielded . Engliſh, or nearly 28 pecks of very fine barley flour, was ſold at thirteenpence halfpenny per peck. What ed in the boulting cloth, and is called the ſharps, was l a ſecond time, and then boulted through the 16 ſhilling

It was partly ſold at eightpence per peck, in the mill he town, and partly brought home to my own family.

(None of it was carried to the market.) It weighed 120 lb. Engliſh, or nearly 13 pecks and a half meal weight.

This winter, I reſumed my experiments on a larger ſcale, becauſe the price of wheat had riſen ſo high; and as the flour mill at Gilcolmſton, near Aberdeen had received a moſt valuable addition of a wire boulter, where the firſt flour paſſes by a 60, the ſecond by a 55, and the third by a 38, the ſharps or ſmall bran by an 18 inch thread, and the large bran at the end. I carried to this mill two quantities of bear, one of crop 1799, which was twice ground, and another of crop 1800, which was ground only once —They yielded as follows:

1ſt Quantity, 307 lb. Averdupois.

Firſt flour of bear,	144 lb. Engliſh.
Second flour	32 lb. ditto.
Third flour	3½ lb. ditto.
Pollard given to poultry	60 lb. ditto.
Coarſe bran for horſes	32 lb. ditto.
Loſt in grinding or dried up	6 lb. ditto.

2d Quantity, 32 ſtones Dutch, or 560 lb. Engliſh.

Firſt flour	187 lb.
Second flour	108 lb.
Third flour	116 lb.
Pollard	95 lb.
Great bran	47 lb.
Loſt or dried up	7 lb.

As the proprietors of this mill, from having much wheat on hand, could not grind more bear this ſeaſon, I have carried ſeveral quantities of bear to *Juſtice-mills* near Aberdeen, held in tack by James Smith, where I have uniformly had from 33 to 36 pecks of meal in the boll of beer, Aberdeenſhire meaſure, weighing from 18½ to 20 ſtones Dutch; and, as the meal is ſifted through a wire ſieve, which has 16 wires in every lineal inch, I have from 30 to 35 lb. Engliſh, or nearly from 3 pecks to a firlot Dutch weight of bran for my horſes.

In order to aſcertain how much was loſt by ſhealing and grinding bear on a corn mill, where bear is always ſhealed, or ſtript of its hulls, before it is ground in Aberdeenſhire, I carried to a neighbouring mill in my own pariſh, 16 ſtones of dried bear, of the very ſame kind with what I had carried to Gilcolmſton, and had 5 pecks leſs of bear-meal in proportion on that ſmall quantity, than I had at the flour-mill; and, from examining the quantities yielded at ſeveral corn-mills of this county, with what is got at a flour-mill, I find there is a loſs o

never leſs than 10, and generally 14 per cent. by grinding bear on the corn-mills of Aberdeenſhire, independent of the value of the bran, of which there is only about half a peck in the boll at the corn-mills in this county, though your machinery in the Lothians is better, and your corn-mills not ſo open as ours, where there is no partition at all between the mill-happer and the door of the mill.

I muſt alſo remark, that while the pollard or ſmall bran is excellent food for poultry, the great bran (conſiſting of the hulls and the duſt, or coarſe meal that adheres to them) when mixed with boiled potatoes, makes excellent food for horſes. I have tried this mixture for ſix years, and I know from experience, that 4 lb. of boiled potatoes, and as much of great bran are ſufficient at one time for a horſe, ſave much corn, and give him a very fine ſkin; and it was from obſerving, that the tackſman of a mill, who was a horſe-dealer, gave all his *mill ring* (i. e. the corn which fills the mill-ſtones when newly picked) along with potatoes, that I learned to mix the great or coarſe bran with that valuable root.

After ſtating the above experiments, I proceed to offer a few obſervations.

1. As England cannot at preſent afford to give us wheat, we ſhould uſe bear or barley as a ſubſtitute; this would keep money in Scotland and wheat in England.

2. Thoſe who don't diſlike the barley taſte, ſhould boult their bear through a 16 ſhilling cloth; this makes it much finer than bear-meal ground on a meal mill.

3. As barley, when baked with water only, becomes black, I would recommend it to thoſe who live in the country, or who can get milk, to bake it with milk or cream. The fineſt barley cannot be diſtinguiſhed by its taſte from wheat flour, when made into ſconns, only it is not ſo white; by baking it with milk, the difference of colour is no longer noticed.

4. If baked with loaf bread, it ſhould be made broad and thin, like a Chriſtmas-cake; it anſwers beſt for morning rolls, baps, or ſconns; and, when baked with milk and butter, it can be uſed for biſcuit, bunns, and particularly for ſhort bread: It is always fit for children, being much lighter than oat-meal. And if the bakers once get into the way of baking it, their trade, even in good years, will be greater, and oat-meal and flour leſs uſed.

5. I ſee no neceſſity for mixing very fine barley flour with wheat flour; it occaſions deceptions or complaints; and the barley requires more fire than the wheat in the mixture.

Extract of a Letter from a Gentleman near Kelso, March 23.

I ſhall be extremely happy to give you every information in my power relative to the ſtate of huſbandry and markets in this neighbourhood; but I beg you will attend, that, when I ſpeak of the price of grain, it is always the Berwick boll of 6 Wincheſter buſhels which is condeſcended upon. This is a neceſſary explanation, for the diverſity among the meaſures of capacity renders the real price of grain imperfectly underſtood.

Our ſeed work, for ſpring wheat, beans, peas, and cold ſeed oats, is finiſhed; and a conſiderable part of the hot ſeed oats are alſo put into the ground. The land was in the fineſt condition, and harrowed well; but laſt week the ſhowers of rain rather damped the clay ſoils. I ought to have excepted the new, and, of courſe, faſhionable variety, called *potatoe oats*, ſome of which, from an idea of their vegetating quickly, and ripening early, remain to be ſown. Some fields of barley are likewiſe ſown, and this grain will continue to be put into the ground as faſt as the turnips are eaten or led off. It is my opinion that there is not more land ſown this ſeaſon than uſual; and this proceeds from the extreme high price of ſeed, which renders ſuch fields, as will not produce more than three or four returns, not worth the ſowing.

Our ſtack-yards, in general, are turned very thin; ſome are empty, and others nearly ſo; and, except upon Tweed-ſide, not much unthreſhed grain remains. Several farmers, who uſed to have from five to ten ſtacks of wheat in their yard at this ſeaſon, have only one or two, but the greateſt part have none. In ſhort, it is my belief, it will take Tweed ſide to ſupply the home-conſumption. With reſpect to beans and peaſe, we have not a ſufficient quantity, and a good deal have been imported. Barley is a ſcarce article, and ſtands the price better than oats or beans.

During the throng of ſeed, prices of grain were extremely high, but oats and peaſe are now rather falling articles; wheat is from 105s. to 115s.; beans and peaſe 70s. to 75s.; oats 36s. to 48s.; barley 60s.; all per Berwick boll. Some of the early oats ſold at 60s. at ſeed time; potatoes 20s. per boll; hay 18d. and 20d. per ſtone; ſtraw 12d. but little of either.

Our markets for both fat and lean ſtock are equally high; beef 8s. and 9s. per ſtone Engliſh, ſinking the offal; mutton currently 8d. per lb. pork the ſame, and in few hands; veal 8d. and 9d. Owing to the quantity of turnips unconſumed to the ſouthward, there has been a great demand for lean ſtock. Great ewes have alſo ſold well, particularly thoſe of the black-faced breed, which are thought to feed the beſt lambs.

s wonderful indeed to obſerve the great and increaſing paid for graſs land; and yet I never met with a farmer ould own he made any thing by ſuch undertakings. To rtain knowledge, ſeveral of theſe graſs farmers loſt 3l. re laſt year; nay, ſome of them were in ſuch a ſcrape, ıe whole ſtock upon the land was inſufficient to pay the Perſiſting in ſuch concerns is aſſuredly ſomething like ſs: if it is not ſo, pray what is it?

h cattle and ſheep have fed well this ſeaſon, and are fatter ommon, which I attribute to the dryneſs and warmneſs weather, rendering the turnips richer than uſual. There e a great ſcarcity of dung; we are at leaſt one-third of our uſual quantity. At Kelſo, it has riſen to 7s. ırt-load, and can, with difficulty, be procured at that

Extract of a Letter from Caithneſs, 21ſt March.

ave at this time little information to communicate, as the of grain are much the ſame as when I laſt wrote you. weather has been uncommonly mild, which was much our of this country, fodder being ſo ſcarce. The bear ıat feed is begun in ſeveral places; for eight or ten ɔaſt, the labouring has been greatly retarded, by a ſevere of ſnow, but it is now moſtly gone, except upon the and we are looking for a fine ſeed time. Hay ſells at 18d. ɔne of 24 lb.

ıkeld, 27th March.——The winter and ſpring ſeaſon has nore temperate than we have experienced for 20 years till within this fortnight; but a change has taken place lay. We have not begun ſeed-work in this neighbour- nor in the vale of Athol or Strath-Tay; but, as the ıll ploughed was in excellent condition, that important h of huſbandry will commence with vigour when the 25th ı, O. S. arrives, which is the period generally adhered this diſtrict for putting the ſpring grain into the ground. r prices for grain and other articles of produce, are as rs.

per boll,	34s. to 44s.	Beef	6d. to 8d. per lb.
ditto,	40s. to 50s.	Mutton	7d. to 8d.
y ditto,	45s. to 50s.	Veal	5d. to 9d.
ıeal ditto,	44s. to 46s.	Cheeſe	6d. to 1s.
y-do. do.	28s. to 29s.	Freſh butter	1s. 6d.
ſeed potatoes,	2s. 8d.	Salt do.	1s. 9d.
ɜs. per two ſtone.		Hay 6d. to 1s. per ſtone.	
do. 2s. 4d. to 2s. 8d. per ɔ ſtone.			

Argyleſhire Quarterly Report.

Our winter having been mild and open, with hardly any froſt or ſnow, the cattle needed leſs provender than uſual; and, by that means, much that would have otherwiſe been ſpent, has been ſaved for food to man. But what we have had of the ſpring has been much more ſevere than the winter, the weather having been generally both cold and wet. The ploughing is nearly in its uſual forwardneſs, but the ground is ſo wet, and the weather ſo cold, that the ſowing, which is not yet begun, will, in all probability, be very late. Little of the oats can be ſown this year at the uſual time in this country, which is from Patrickmas to the end of March, O. S. If our weather does not mend ſoon, the provender for cattle muſt alſo become very ſcarce; ſo that they muſt ſtill have their ſhare of the proviſion that was intended for man.

The market continues to be high. Oat-meal in general ſells at 2s. 6d. the peck of 8 lb. In the diſtrict of Kintyre, where the weight is 10 lb. it ſells at 3s. but is not eaſily got, as a conſiderable quantity was exported before it was raiſed to this price. Bear-meal is 2s. Bear 50s. per boll. Seed-oats 48s. Potatoes 5s. per barrel. Beef 5d. per lb. Engliſh. Beans 42s. to 45s. per boll.

From the exertions made by the landed intereſt to ſtop the illegal practice of diſtilling, and the fines laid on ſuch as have been detected, leſs bear has been conſumed in that way than is uſually done; ſo that it is hoped the country may very nearly ſerve itſelf till the new crop arrives. The town of Inverary, which is ſurrounded by a tract of country that yields very little corn, has been ſupplied by the kind and fatherly care of the Duke of Argyle, with Indian corn and flour from America, of which His Grace has moſt liberally offered the town of Campbeltown a ſhare, if it ſhould be needed.

To the ſheep-graziers or ſtore maſters, who occupy much of the higher parts of the country, the winter has been very favourable; but if the preſent ſevere weather continues for any time, they muſt be great ſufferers, as the lambing ſeaſon is to them a very critical period. The herring fiſhing of this country has not been, this laſt ſeaſon, ſo ſucceſsful as uſual, but the exceſs in the price will probably make up for the deficiency in quantity.

24*th March* 1801.

Roſs-ſhire Quarterly Report.

The weather for theſe three months paſt has been, upon the whole, favourable to the farmer; though, from the 12th

to the 24th of this month, the froſts in the night, with frequent ſhowers of ſnow, ſleet, and rain, kept the ground in a ſtate not fit to receive the ſeed; yet as it is now dry freſh weather, and as part of the oats and peaſe were ſown in good order before the late unfavourable change, it is hoped the whole will be finiſhed in good time. Wheats and ſown graſſes wear a favourable appearance; in ſome inſtances the former is too luxuriant. The openneſs of the ſeaſon has been of much ſervice in preſerving the live ſtock. A great number of our cattle have been able to ſhift for themſelves without provender of any kind. It is fortunate that ploughing in winter was ſo well attended to, as hay and ſtraw are, with many, quite exhauſted. The barley lands muſt, in general, be prepared by feeding upon graſs, which will make the operation difficult for many. The ſtate of the poor cottagers is now truly deplorable; for, though barley can ſtill be had, it is at the enormous price of from 46s. to 50s. per boll; and the trouble and expence of mealing it here is conſiderable. It is impoſſible for labourers, whoſe average-wages are 9d. per day, to provide for their families at theſe prices; and, what adds to their diſtreſs, many of them are out of employment, fewer hands being employed this ſeaſon by the farmers than uſual. Having ſtated the prices of barley, little more can be ſaid on that head, as, in fact, we have neither meal nor any other grain for ſale. Potatoes are nearly exhauſted; many of the cottagers and ſmall tenants have not been able to reſerve ſeed for planting their patches of ground, which is abſolutely neceſſary for their very exiſtence. With theſe proſpects before them, no wonder the idea of emigration ſhould ſuggeſt itſelf, and flatter them with relief from ſuch diſtreſſes, in a foreign country. Numbers are preparing to go to America, about 400, beſides children, in this part of the country, have already engaged to ſail for that continent in a few weeks hence. Beef and mutton have been ſelling from 4d. to 6d. per lb. but very little is ſlaughtered in this county at this ſeaſon for the public market. Drovers have appeared here earlier than uſual, and have carried off the beaſts in condition at good prices, but it will be ſome time before the bulk of our cattle are fit for the road.

March 27th, 1801.

Berwickſhire Quarterly Report.

THE weather, during this quarter, has been ſingularly propitious to every branch of rural economy; whatever aid winter-paſturage could afford in eking out the ſcanty ſtock of ſtraw,

has been obtained; notwithſtanding which, the ſtack-yards in general never exhibited a more vacant appearance at this period of the year. Hay is comparatively more abundant, the mildneſs of the winter having precluded any neceſſity of foddering ſheep from the hay-ſtack; the price ſince January has, in conſequence, been upon the decline; the rate at preſent is from 14d. to 16d. per ſtone of 22½ lb. Engliſh.

Turnips have ſtood the winter without material injury, and have afforded an eatage fully equal to what their appearance in autumn indicated. The number of oxen fed did not exceed the ordinary average; but, in addition to theſe, a great many young cattle were allowed a feed of turnips once a day, or oftener, which, while it prepared them for early graſs, contributed alſo to the ſaving of fodder; the expence of wintering on ſtraw alone being from 40s. to 60s. a-head. Some farmers likewiſe allowed their horſes a few turnips along with the ordinary fodder, and ſeemed to conſider them highly beneficial: but as no comparative trial has been made, the utility of this practice is not yet fairly aſcertained.

Sheep, fed for the butcher, might be reckoned rather ſhort of the uſual compliment, an uncommon number having been taken off by the Engliſh jobbers in autumn. The ſeaſon throughout has been remarkably favourable to ſtock ſheep; ewes, in the lower diſtrict, are pretty far advanced in dropping lambs, but do not twin ſo well as uſual.

A conſiderable proportion of the fat ſtock has already been brought up by the jobbers, and about the middle of March a number of lean cattle were alſo taken off at good prices, for the Engliſh paſtures.

Winter wheats, and young clovers, have everywhere a moſt promiſing appearance, and early paſture begins to put on a freſh green.

A great deal of ſpring wheat has been ſown, chiefly after turnip; the ſeaſon having afforded opportunities of ſowing, almoſt as ſoon as that crop could be cleared off the ground. Few peaſe or beans were ſown till towards the end of February; oats ſowing commenced with the fine weather which uſhered in the month of March; and, as little or no ploughing remained to be done, and the land harrowed freely, ſeveral farmers, poſſeſſing dry ſoil, had completed their oat-ſeed by the middle of the month, ſince which, ſome fields of barley have alſo been ſown; and though there have been ſnow ſhowers during the laſt fortnight, which has retarded the harrowing upon wet grounds, yet, even there, the oat-ſeed is now drawing near a cloſe. Upon the whole, the different field-operations have ſeldom been carried on under more auſpicious circumſtances than during this and the two preceding months.

Though the number of incloſures annually let by auction for ſturage, has increaſed this ſeaſon, that circumſtance has as t had ſmall influence in moderating graſs-rents; from which, ere is little room to ſuppoſe that butcher markets can reſume eir accuſtomed level for ſome time.

Corn markets have experienced a gradual advance ſince the ginning of the quarter, with the exception of mealing-oats, hich have dropped a little of late; ſeed corn has ſold at high rices; a new ſpecies of oats, originally from Cumberland, has ld currently from 60s. to 72s. per boll of ſix buſhels.

Market prices at Berwick, March 28th.

Wheat	100s. to 110s.	}	Per boll of ſix buſhels.
Barley	56s. to 58s.		
Oats	35s. to 36s.		
Peaſe	—— to 80s.		
Beef	6d. to 8d.	}	Per lb. of 16 ounces.
Mutton	6d. to 8d.		
Veal	8d. to 9d.		

Pork, for the London market, 7s. 6d. per ſtone of 16 lb.
Butter 12d. per pound, and eggs 8½d. per dozen.
Oat-meal in retail has been ſelling at 5s. 6d. and 6s. per ſtone, Dutch weight.

While there is pleaſure in remarking the judicious arrangeents that have taken place, in the different pariſhes of this unty, for ſupplying the induſtrious poor with meal at a reced price; the ſober, peaceable manner in which that uſeful aſs of the community have conducted themſelves, under the reſſure of the exiſting ſcarcity, redounds much to their credit, id ought not to paſs unnoticed

In conſequence of an order of the Juſtices, grain *of all ſorts* in future to be ſold in this county by the Linlithgow ſtandd barley meaſure only, and an inſpector, appointed by them, at preſent employed in adjuſting the different meaſures to that andard; four bolls of which is nearly equal to three Engliſh uarters.

March 28th, 1801.

Eaſt-Lothian Quarterly Report.

The greateſt part of the current quarter has been remarkably vourable for conducting farm-operations, and the manner in hich they have been executed preſents a ſtriking contraſt with hat occurred in laſt unfortunate ſpring ſeaſon. The ground as in general received the full benefit of ploughing, and, with

ſome partial exceptions, has harrowed in a free and eaſy manner. In a word, if a good crop neceſſarily follows a ſuitable preparation, there is every cauſe to hope that a return will be made to the labours of the huſbandman, equal to his moſt ſanguine expectations.

Prices of grain ſtill keep up, though, unleſs it be in the article of wheat, they do not exceed thoſe of laſt year at the ſame period, while the quality, unleſs it be that of oats, is greatly ſuperior. Wheat is now a ſcarce article; few farmers have any quantity worth while on hand, and ſome have none at all. At this time, good wheat is worth from 72s. to 78s. per Linlithgow boll (about 3l. per cent. above 4 Wincheſter buſhels) but much of this grain being damaged by the autumnal rains, it is conſequently of leſs value upon an average. Beans and peaſe have, for a month paſt, appeared in large quantities, and in no year have fuller markets of theſe grains been ſeen at Haddington, than during the months of February and March. The reaſon of this is obvious: bean and peaſe-ſtraw is the cuſtomary fodder of the working ſtock; and, being ſhort and of little bulk this year, a greater quantity of grain muſt neceſſarily be threſhed out, before the portion of ſtraw, required for the labouring beaſts, can be made up.

Both fat and lean cattle, particularly the latter, have much increaſed in value; but the riſe was eaſily foreſeen by every perſon who reflected upon the ſtate of markets at the end of laſt year: Fewer cattle being wintered than common, neceſſarily made more purchaſers when the graſs ſeaſon arrived; and, in addition to this, an extraordinary demand from the ſouth greatly encreaſed a ſcarcity, which, at all events, would have prevailed, though in an inferior degree.

Graſs-parks, upon the whole, have not fallen in rent; ſome of them have even gone higher than laſt year, which is a ſure proof that the extent of paſture-land is below the demand. We obſerve with ſurpriſe, in a memorial *lately publiſhed*, that the increaſe of paſturage is aſſigned as the cauſe why corn is ſo ſcarce, which certainly does not hold true, when applied to this county. At no period was leſs land kept in graſs, though probably it might be for the intereſt of all concerned that the ſyſtem, reprobated by the leanred author of the pamphlet alluded to, was more extenſively adopted.

Seed-work is far advanced, eſpecially upon the coaſt ſide, and little obſtruction has offered this ſeaſon to that important branch of rural buſineſs. The winter wheat has a moſt promiſing aſpect. About the middle of March, it was rather at a ſtand, but the late fine weather has effectually revived it. In a word, if the farmer had had the choice of a ſeaſon, he could not have got one more to his mind, and it will give us much

leaſure to ſtate in our next, that the preſent favourable pro-ect has been fully realiſed.

March 30th.

Mid-Lothian Quarterly Report, from January 4th to April 4th, inclusive, 1801.

It is with great ſatisfaction that we can continue to ſtate the ame favourable circumſtances in the ſeaſon, as in the preced-ng quarter, and that the operations of huſbandry, ſo propitious n the commencement, after Harvest, have been carried for-ard during the Winter, and hitherto in the Spring, in that ell-*tided* order and condition, as to induce us to form the moſt opeful prognoſtication of the enſuing crop. The wheat crop verywhere looks well, and never was there more land under : The graſs lands are as forward as in the mildeſt ſeaſons: he proportion of old paſture lands ploughed up for oats, is reat beyond example, and all ſeeds hitherto put in the ground, ave been accompliſhed in the very beſt ſtile; while every re-aining branch of agricultural labour is in an unuſual degree f forwardneſs.

The weather, after all, during this quarter, however condu-ive it has been to vegetation and good tillage, has neither, in eneral, been moderate nor uniform, but, on the contrary, hangeable in the extreme; ſometimes, as of late, exceeding arm, but more generally cold and piercing, and very frequent-y boiſterous and ſtormy to an exceſſive degree; but it has all long been comparatively dry, the quantity either of ſnow or f rain having been very inconſiderable.

While with pleaſure we ſtate the preſent favourable proſpect s to the future crop, we muſt ſtill continue to recommend ri-id economy in the uſe of proviſions, and to warn the good eople of this country, that it is now chiefly to corn merchants nd dealers in grain, (whoſe very exertions they have been *aught* to curſe and deprecate) that they muſt look forward to, or near 5 months to come, for ſubſiſtence; as the quantity of orn remaining in the hands of the cultivators of the ſoil, never as in recollection, nor perhaps in record, ſo very little indeed t this day of the year.

With reſpect to the *price* of proviſions, one remark has ap-lied throughout, which is, that while the *news-men* (honeſt ouls!) have never ceaſed to announce, from week to week, and rom day to day, that "here it was *fallen*, and there it was *fal-en*," it has, nevertheleſs, as if in perfect deſpite of their intelli-ence, continued to advance, and that in no ſmall proportion: Thus, wheat, the great ſtaff of life, which we noticed in the

preceding quarter to have reached at what we then thought its ultimatum, viz. 70s. the boll, is now come to 78s.; and barley, that was, 3 months ago, thought beyond all ſufferance high, at 52s., has ſince reached to 63s.

RETURN of Grain, Flour, &c. imported and exported at Leith, from the week ending January 10th to the week ending April 4th, inclusive, being 13 weeks in all, converted into quarters in the ſame proportion, as ſtated in Vol. I. p. 474

	Qrs.
Imported coaſtways -	44,386
Foreign - - -	12,364
Total imported	56,750
Deduct *exported* coaſtways	17,093
Remains for Edinburgh, &c.	39,657

Oat-meal ſold in Edinburgh market for the laſt 13 weeks ending March 31ſt 1801, Lothian 4472 bolls—South Country 1400 bolls. Wheat ſold in Haddington market, for the laſt 13 weeks, ending April 3d, 2391 bolls, which is leſs than two-thirds of the quantity in the preceding quarter.

Extract of a Letter from a Gentleman near Perth, March 31ſt.

The weather in this part of the county, for three months by-paſt, though very variable, and often on the extreme in moſt reſpects, yet on the whole has been favourable for forwarding the different field-works, and likewiſe friendly to the fodder. The oat ſeed commenced with ſome farmers in this neighbourhood about the firſt week of March, but, after getting on very lively for a few days, an entire ſtop was put to the work by a ſmart froſt, accompanied with ſlight ſhowers of ſnow. On the Grampian hills, within our view, the ſnow fell in great quantities and lay very deep. Sowing was interrupted for nearly three weeks, but now goes on again briſkly, and I am happy to add, the ground appears in excellent ſtate for the ſeed.

Vegetation, both on the wheat and ſown graſs fields, has made a moſt pleaſing appearance within theſe three days; and I moſt ſincerely hope it will now continue free from any more checks, till there is again plenty of *keep* for beſtial without doors, which is indeed much wanted and anxiouſly looked forward to. I truſt alſo that *man's labour* for a reproduction of corn from the ground will be bleſſed with ſucceſs. I cannot here omit mentioning the very uſeful ſubſtitute for fodder, *whins*, ſo much reſorted to over all this country, and with the beſt poſſible effect,

g moſt conducive (when properly prepared by threſhing) he health and good ſpirits both of cattle and horſes. No ot the labour neceſſary for picking the green tops from the buſhes is very conſiderable, and will never be afforded when ler is to be had at its ordinary price. This might however bviated in time coming, by ſowing whin ſeed on ordinary l, in which caſe the crop might be cut with the ſcythe, as mmended by ſome writers well known to many of your lers. For my own part, I had no occaſion to try the whins winter for my ſtock, but am credibly informed that ſome s, kept almoſt ſolely on them, have given milk in nearly al quantity as if they had been fed on cut clover, other cir- ıſtances conſidered.

ıt a time like the preſent, when the improvement of waſte ls is ſo much talked of, it is with ſingular pleaſure I have in r an object of that nature on the oppoſite bank of the Tay here I reſide.—What I here allude to is, *trenching with the* r, a conſiderable tract of exceeding rough ſtony ground, ı by nature as no plough could penetrate. Indeed, after operation of trenching has been gone about, and the ſtones ght to the ſurface, they lye ſo thick as almoſt to cover the of the ground; however, they will now be ready at hand e applied to many uſeful purpoſes. Were it not for this able exertion of the worthy proprietor, (the D–k–e of A.) extenſive field, though moſt favourably ſituated on a fine ng bank to the ſouth, muſt have lain for ever uſeleſs and oductive to the country.

Were ſuch a plan as this to be generally followed by pro- tors of extenſive eſtates, it would have the happy tendency reſent to give employ to the vaſt numbers of operative eſmen, particularly weavers; and in the end, make a laſting rovement on the face of our country at large.

rices of grain here, are nearly as follows:

Wheat 66s. to 70s. barley 45s. to 50s. oats 42s. to 45s. all boll. Oat-meal 2s. 11d. barley-meal 1s. 10d. peaſe-meal 11d. all per peck. Beef 6d. to 7d. mutton 8d. veal 6d. d. pork 6d. per lb. of 16 ounces. Butter 1s. 2d. to 1s. 3d. lb. of 22 ounces.

Extract of a Letter from Aberdeenſhire, March 27th.

We have had a moſt favourable winter; our ſeed time com- ced before the end of February, and by the 8th March a t many oats were ſown. The weather then changed to , with frequent ſhowers of ſnow, which reduced the fields perfect mire, and upon the 20th we had a more intenſe than what we experienced any time during laſt winter.

Some of the ſown lands were then but half harrowed, while in others the young plants were well rooted, ſo, if none of them have received injury, we need never be afraid of ſevere weather in ſeed time.

There has been little fluctuation in the grain markets of the county ſince my laſt, but the prices are now equalized in the different diſtricts. Fodder is ſtill extraordinary dear, being not leſs than from 20s. to 25s. per boll of grain, Aberdeenſhire meaſure. Oat-meal ſells at 45s. bear do. 32s. per boll. Potatoes 2s. per peck, of 35lb. Averdupoize. Seed oats have been as high as 52s. per boll.

Retail-prices of meal, potatoes, and butcher-meat in Aberdeen market. Oat-meal 2s. 9d. bear-meal 1s. 10½d. potatoes 2s. 6d. per peck. Beef 5½d. to 6½d. mutton 3d. to 6d. per lb.

Inverneſs Quarterly Report.

Prices of grain have kept pretty ſteady. Wheat may be noted at 60s. to 63s.; barley 45s. to 50s.; oats 45s. to 50s.; peaſe 45s. to 54s. per boll; oat-meal 48s. to 50s. per boll of 9 ſtone; bear-meal 38s. to 43s. per boll of 10 ſtone; potatoes at 2s. per peck, and very ſcarce. Five firlots of oats are given for the boll.

The poor about the town of Inverneſs continue to be ſupplied with meal at reduced prices, and, from the liberal ſubſcriptions given to the fund, it is expected they will be accommodated upon the ſame terms till the arrival of next harveſt. Hay ſells currently at 2s. per ſtone. Provender of all kinds is alſo extremely high, and difficult to be got. Fortunately the winter and ſpring have been open and mild, otherwiſe the conſequences might have been ſerious to thoſe who held a ſtock of cattle. Drovers are now buying lean ſtock briſkly at good prices, a circumſtance greatly in favours of the Highland diſtricts. Great ewes are alſo in requeſt, and currently ſell at the advanced prices of 14l. and 15l. per ſcore; beef and mutton are 6d. per lb. but will probably advance ſoon, as the fat is nearly exhauſted. Few turnips remain, but that valuable root has paid better this ſeaſon than uſual, having in many inſtances afforded a return of 12l. and 15l. per acre, when uſed in feeding of cattle and ſheep.

The ſpring work is in a forward ſtate, a great proportion of oats and peaſe being ſown before the middle of this month, when we had ſevere froſts accompanied with ſnow, which for a time ſtopped further progreſs. The weather is now again become extremely mild for the ſeaſon of the year, and preſent appearances give us reaſon to expect that the labour of the huſbandman will this year be crowned with ſucceſs, and that

will not have a third deficient crop to add to the two that paſt. The young wheats are luxuriant, the clover fields well, and the graſs fields, in general, promiſe to be much ier than uſual.

Many hundreds of the poor people of this country, from their reſſed circumſtances, are driven to the direful neceſſity of grating to America, and ſeveral veſſels are engaged for ſporting them thither. One perſon has already received ve 1000l. Sterling as a depoſit from the miſled emigrants; ers, who formerly left this country, did not better their con-on, but their anxiety to remove from their native homes iciently proves their preſent uncomfortable ſtate.

ricultural Report for the County of Tweedale, for the Quarter ending March 30th 1801.

The weather continuing good during February, and to the h of March, the ploughing was almoſt all finiſhed before the al time of ſowing, conſequently the ſeed commenced by the of March, and in many places on the laſt week of February: t upon the 16th a ſevere thunder-ſtorm, attended with hail l ſnow, ſo very materially altered the weather, as to ſtop all ing operations until the 25th, when the weather again ſet ood, and continues ſo until *this date;* the oat and peaſe ſeed be finiſhed by the ſecond week of April. In conſequence the winter and ſpring being uncommonly freſh and mild, not y the foggages have been of the greateſt ſervice in ſupport-; the wintering cattle, and preventing the general alarm of rcity of fodder; but the turnip crop has been alſo brought to greateſt advantage perhaps ever experienced in any former ar, as few of them rotted in the fields, and ſcarce a day in the ſon but afforded free acceſs either for field or ſtall-feeding, is obvious, however, that there will be little grain in this unty after the ground is ſown, as the grain is almoſt threſhed t, the ſowing this year being conſiderably more extenſive an uſual. As the weather hath now taken a favourable turn, look forward with hope to an abundant crop both of grain d graſs, as upon the latter our cattle muſt have their princi-l ſupply by the middle of April, the fodder (notwithſtanding ood winter) being almoſt exhauſted.

The prices of grain and meal have experienced little altera-n theſe two months paſt, excepting what was bought for ſeed.

Oat-meal ſells at preſent at	2s.	8d.	per peck
Bear do. - -	2	0	
Peaſe do. - -	2	1	
Pot barley - -	4	0	per ſtone.

Seed oats from L. 2 0 0 to L. 2 5 0
Seed peaſe from 2 8 0 2 10 0 } per boll.
Bear from - 2 5 0 2 8 0

Beef from 4d. to 6d. per lb. Dutch.
Mutton 6d. per lb. do
Freſh butter 1s. 2d. per lb. of 23 oz.
Eggs 6d. per dozen
Great or heavy ewes from 15l. to 17l. per ſcore.
Ready ſale graſs-cattle.
Large demand alſo for horſes, and prices near doubled ſince Martinmas.
March 30th 1801.

Middle-Ward of Lanarkſhire Quarterly Report.

The openneſs of the winter and ſpring having proved favourable for field-labour; the work of the plough is in ſo much forwardneſs, that many farmers have been almoſt idle for ſome time paſt, and are in general perfectly ready for the ſeed-work, which is now much retarded by the late ſtormy weather. There is juſt now the greateſt quantity of land under tillage in this part of the country ever remembered, including ſeveral large fields of old paſture land, which are in good condition for carrying corn crops, though ſome of the early ploughed land is a little waſhed with the rains, and quicks are making their appearance in ſome fields where the land is not perfectly clean: Although the great quantity of ſeed which will neceſſarily be uſed this ſeaſon, muſt contribute to keep up the markets for the preſent, yet the extra ſowing affords great hopes, that the enſuing crop will have the wiſhed-for effect, in reducing the preſent extravagant price of grain.

From the great diverſity of ſoil in this country, different kinds of ſeed are ſown to ſuit the different ſoils. Oats being our principal crop, the kinds moſt generally uſed are *air ſeed*, (or perhaps more properly early ſeed) Tweeddale, or Blainſley, and late ſeed. Another kind of oats has been introduced here, which was brought from Cumberland about two years ago, very much like the ſmall Dutch, and commonly called *potatoe oats*, which appear to anſwer very well when ſown on good land, and produce conſiderably more meal per boll than the other kinds ordinarily uſed; there is more demand for them this year than can be anſwered.

The wheat ſown laſt ſeaſon looks promiſing, though the quantity is much leſs than on ſome former years.

The favourable winter, with the exertions that have been made in providing ſubſtitutes for fodder, have, in a great mea-

ſure, prevented the fatal conſequences ſo much feared, to the cattle, and the price of hay is already reduced, being at preſent from 14d. to 16d. per ſtone. Many individuals have uſed heath and toppings of whins for their cattle; the laſt of theſe is allowed to have kept the cattle in good habit, and to produce very good milk, when uſed for cows.

Our markets for grain have been conſiderably on the advance ſince laſt report, but are now ſomewhat reduced. Oatmeal retails at preſent about 2s. 9d. per peck; peaſe and barley-meal about 2s. 1d.; butcher meat from 8d. to 10d. per lb. Tron weight; butter from 1s. 4d. to 1s. 6d. per lb.; ſeed-oats are from 40s. to 47s. per boll, but the potatoe-oats are conſiderably higher; peaſe and beans run from 50s. to 55s. per boll; potatoes vary very much in price, and may be about 2s. 3d. or 2s. 4d. per water peck, or 5s. per corn firlot.

March 30*th*.

Extract of a letter from Glaſgow, April 2.——The mildneſs of the winter has been very favourable for getting tillage forward; but the unſettled weather which we have had ſince February, has prevented any ſowing as yet As the weather is now become very fine, beans and oat ſeed may be expected to be completed ſoon. The wheat has a fine appearance, and ſeems to do well. Fodder is ſcarce and dear, notwithſtanding the open winter. Our market is tolerably well ſupplied with meal and all kinds of grain. We have had a conſiderable quantity of flour, and Indian corn meal from America of late, and of a very good quality. Although our markets are well ſupplied, prices keep very high.—Annexed you have the currency of our market.

Preſent prices of grain, &c.

American wheat	72s. to 74s.	per boll of 240 lb.		
Dantzic ditto	75s.	per ditto	Linlithgow	meaſure.
Hamburgh ditto	70s. to 72s.	per ditto	ditto	ditto
Britiſh ditto	68s. to 73s.	per do.	do.	do.
Ditto barley	50s. to 56s.	per do.	Stirling meaſure.	
Foreign ditto	48s. to 54s.	per do.	do	do.
Ditto beans	48s. to 52s.	per do.	do.	do.
Britiſh ditto	48s. to 52s.	per do.	do.	do.
Ditto peaſe	50s. to 54s.	per do.	do.	do.
Ditto oats	45s to 50s.	per do.	do.	do.
Oat meal	44s. to 45s.	per do. of 140 lb.		
Peaſe ditto	33s. to 36s.	per do. of do.		
Barley ditto	32s. to 34s.	per do. of do.		
Indian corn ditto	9l.	per puncheon of 800 lb.		
Ditto	2l. 4s.	per barrel of 196 lb.		

American flour 4l. per barrel of 196 lb.
Flour of our own manufacturing 5l. 10s. per ſack of 2½ cwt.
Beef 10d. to 1s. 2d. per lb. Tron weight.
Mutton 1s. to 1s. 2d. per do. do.
Veal 9d. to 1s. 1d. per do. do.
Hay 1s. 4d. to 1s. 6d. per ſtone do.

ENGLAND.

Extract of a Letter from a Gentleman in Lincolnſhire.

I am happy to inform you, that we have the proſpect of getting the incloſure-buſineſs, which I formerly mentioned to you, brought to a ſpeedy termination. On this occaſion, great praiſe is due to Sir Joſeph Banks, Bart. who has conducted the affair in a moſt regular and judicious manner. Several attempts had formerly been made by the late Duke of Ancaſter, and others, to effectuate the ſame object, which were baffled by the oppoſition of thoſe concerned; nor will it excite wonder, that a difference of opinion ſhould prevail in carrying this matter into execution, ſeeing that 50 pariſhes and 3 market-towns are intereſted in the incloſure, and that the common in queſtion contains betwixt 40,000 and 50,000 acres.

Reſpecting our markets for corn, &c. I beg leave to ſay, that wheat ſells from 123s. to 150s.; barley from 70s to 84s.; oats from 40s. to 60s.; beans from 80s. to 100s.; all per quarter of 8 ſtrikes, or Wincheſter buſhels. Beef is 8s. per ſtone of 14 lb.; pork 9s. per ditto; mutton 8d. per lb. Our crops were very partial this ſeaſon. Upon clays and heavy ſoils, they were exceedingly defective, but, on the fens and high wolds, they were much as uſual. Poor rates are double their uſual extent.

Hull, 19th March.——At our markets on Tueſday, little was done. The prices were as follows: Wheat 100s. to 135s. Barley 68s. to 72s. Oats 35s. to 55s. Beans 74s. to 84s.—all per quarter. Butcher-meat from 7d. to 10d. per lb. Bread flour 5s. 6d. Coarſe ditto 4s. 6d. Fine 6s. 6d. per ſtone. Potatoes 17d. and 18d. per peck. Butter 18d. per lb. Cheeſe 7d. to 1s. per lb. The appearance of the country was never more favourable, and all kinds of huſbandry going on well. Some of the late ſown clover wheats have been attacked by the grub, though not more than uſual. The mild winter has ſaved much fodder, ſo that no real want of it is yet felt. Public opinion is, that a great and ſpeedy reduction of the price of

grain will take place, although we are ſhut out from ſo many places of importation.

Yorkſhire Quarterly Report.

About the end of February and beginning of March, the farmers were buſily employed in preparing for the ſpring ſeed, for which the dry ſtate of the ſoil was at that time particularly inviting. A conſiderable reverſe in the weather has taken place ſince, and a deep ſnow, in particular, has neceſſarily protracted the buſineſs for ſome time; yet much land has been ſown with beans, &c. and ſome fields with oats and barley, in good condition. The growing wheats have, in general, a moſt flouriſhing appearance; the general mildneſs of the winter has been ſuch as to ſecure them from any material check as yet, and they have been preſerved in an uncommon degree from the ravages of worms and other reptiles; ſo that there ſeems at preſent every reaſon to augur well of the produce; and, from the uncommon quantity of land ſown with wheat, to preſume on a more copious ſupply of that neceſſary article in a future ſeaſon, whatever may be the caſe before harveſt. In ſeveral parts of the country, ſome graſs ground has been ploughed up for oats and potatoes; but, from the quantity under wheat, and the ſmall proportion left for barley, it may be fairly preſumed, that that grain will maintain a high relative value for at leaſt another ſeaſon.

Though the turnips failed of their uſual ſupply, yet, from the mildneſs of the winter, and the comparative thinneſs of ſtock, hay is rather a declining article.

The price of the beſt wheat is 19s. barley 12s. oats 6s. and beans 12s. per buſhel Wincheſter, but the prices are falling. Grain of all ſorts is much ſuperior in quality to that of laſt year; and the malt, in general, is obſerved to make the beſt ale, in proportion, that has been known for many years paſt. Potatoes are 4s. per buſhel. Many well informed people are of opinion, that corn will not ſpeedily be reduced to a moderate rate, unleſs in caſe of a peace, which probably would much reduce the price.

The cattle and ſheep are ſcarce, but moſtly primely fattened; ſheep on turnips, &c. have fattened uncommonly well, and been generally very healthy. Fat cattle at Wakefield and Rotheram markets are already ſelling at 10s. per ſtone of 14 lb.; and fat ſheep at 10d. per lb. ſinking the offal. Beef and mutton from 8d. to 9d. per lb. and an advance is feared; butter 1s. 6d. per lb. lean ſtock, and cows, and calves, dear beyond all precedent. Good horſes for the ſaddle, and all work, ſell at high prices; ordinary ones are with difficulty turned into money.

The wages of labourers have been but little advanced of late, and it is among the lamentable circumſtances reſulting from the preſent dearneſs of bread, that that claſs of men, who have hitherto been enabled to keep a cow or two for their families, from the principle of our poor's laws, "*that no perſon ſhall* "*be entitled to parochial aſſiſtance while poſſeſſed of any ſort of pro-* "*perty,*" have before them the cheerleſs proſpect of being obliged to ſell their cows for bread It is to be wiſhed and hoped, that a ſuitable remedy was deviſed, for relieving ſuch of the above deſcription of perſons as more particularly, from large families of children, &c. may be in need of aſſiſtance. That aſſiſtance is a *wretched boon*, which is not to be afforded until a man be a beggar.

March 21.

Extract of a Letter from a Farmer near Wakefield, March 27.

THE winter having proved favourable, turnips kept improving till Chriſtmas, where they were free from the grub, and have turned out a ſuperior crop to what was expected. Fat cattle, of courſe, have come pretty regularly to market, and we are as yet tolerably well ſupplied both with beaſts and ſheep. Prices are, however, upon the advance, and beef is worth 9s. and 10s. per ſtone of 14 lb. ſinking the offal. As the weather has ſet in fine, I truſt it will not go higher, for graſs ſheep may be expected at market earlier than uſual.

Our operations in the field have been much retarded ſince the 11th inſtant, by a great fall of ſnow. Previous to that time, we had remarkable fine weather, when many beans, and ſome barley and oats, were put into the ground. The land is again getting into good order, and we are ſowing oats and barley very rapidly. The high price of grain has induced many farmers to plough out their graſs land; and I hope, if it pleaſe God to continue the favourable weather, that grain will come, after next harveſt, to a reaſonable price. We have abundance of wheat ſown, and I never ſaw it look better at this ſeaſon of the year.

Our market is very moderately ſupplied with wheat, but oats are plentiful, and have lately declined in price; alſo beans and peaſe. Fine barleys continue high, much of the beſt ſort being ground down for bread. The ordinary qualities have rather a dull ſale, the maltſters having given up work, not chuſing to lay up a ſtock upon the preſent terms. At Wakefield market, this day, prices were—wheat, from 130s. to 174s.; barley 68s. to 84s.; oats 46s. to 60s.; beans 80s. to 86s.; grey peaſe 85s. to 90s.; all per quarter of 8 Wincheſter buſhels.

Lean cattle are higher in price than ever known with us, at leaſt 30 per cent. above what was given laſt ſpring. This

ne meaſure, is occaſioned by the quantity of turnips on , and the promiſing appearance of the graſs lands. The : ſlaughter of half fed beaſts at the latter end of the laſt has not only encreaſed the ſcarcity, but likewiſe augment- .e demand.

Extract of a Letter from a Farmer in Wales, March 24.

this part of the Iſland we have had a moſt favourable :r, little froſt, and no heavy rains before the 11th of this ch. At that time farm work was going on briſkly, and great reſs made in the ſowing of ſpring grains; but a ſucceſſion of , rain, and hail ſhowers, has put a general ſtop to ſeed work. e wheat was ſown about the beginning of the month, and an mmon quantity of peaſe and beans, though we have great ulty in procuring ſeed, which was chiefly purchaſed in Breck- ſhire, and at Briſtol, otherwiſe theſe grains would moſt likely been all ſown before the weather broke. The greateſt part e oats were ſown in good order before the rain; but I fear will now ſuffer, as the land is ſo wet. The extent of land with this grain, is much greater than uſual, the price of y being beyond the reach of many people who have to pur- : ſeed. The young wheats, in general, look well, thoſe ſown were ſo forward as to require to be eaten down with . Great preparations are making for planting potatoes, more land will be occupied with this root than uſual.

wing to the favourable winter, and the great demand for , hay and ſtraw have lowered much in price. Good hay ow be bought for 5cs. and 60s. per ton, which, laſt year at ime, was worth 8l. Every other article, however, is on dvance; wheat ſells from 56s. to 60s. per buſhel of 20 ms; barley from 36s. to 40s. per ditto; peaſe, beans, and , 38s per ditto; oats from 22s. to 25s. per buſhel of 32 gal- ; butcher-meat, 6d. to 9d. per lb.; freſh butter, 1s. 3d.; ſalt , 1s. 1d; cheeſe, 8d. to 1s. At our Cardiff fair on the ſe- Wedneſday of March, there were more Engliſhmen ap- ed to purchaſe cattle than ever known ſo early in the ſea- and every kind, able to walk, went off at high prices. We had a ſupply of barley, which has given us conſiderable f, but much of it is ſprouted, and inferior to what is raiſed iis part of the country. It is chiefly bought by ſmall far- , many of whom are entirely out of corn; and the lower of tradeſmen and ſhop-keepers, who cannot have relief the pariſh, till they part with their little ſtock. The preſent d to theſe claſſes is truly diſtreſſing, but as for the labour- people, they are all on the pariſh funds, and will not eat ated barley, but call for the beſt, let the price be what it

will. A curious circumſtance happened laſt week to one of my neighbours, who is overſeer of the poor, and has a family of 12 children, with a dear farm and heavy taxes: A man, who has a wife and four children, and earns 10s. per week, which, with 9s. per week from the pariſh, is 19s. altogether, came to him, and demanded an increaſe of his allowance. The overſeer told him he ſhould receive no addition, as he was in better circumſtances than himſelf, and that he would be glad to change ſituations; upon which the pauper immediately removed his wife and family to the overſeer's houſe, kept poſſeſſion for a night, and with difficulty was got quit of next morning. This circumſtance may give you a ſlight idea of the defectiveneſs of our poor laws, in fact, they prevent every degree of induſtry among thoſe who can legally claim ſupport, while they are an intolerable burthen upon the induſtrious part of the community.

Extract of a Letter from a Farmer near Pontefract, April 2.

I have peruſed your publication with great pleaſure, and am glad to ſee the firſt of the ſciences illuſtrated in a practical manner. My mite of intelligence is at your ſervice, as I conſider it to be an incumbent duty upon every farmer, to ſupport a work ſo well calculated for the information of rural practitioners.

The ſowing of the ſpring grains was well advanced three weeks ago, but the continued bad weather ſince has much retarded the progreſs of that neceſſary operation. The land is now getting into good order, and we have the proſpect of concluding our ſeed work in a huſbandman like ſtile.

The lambing ſeaſon has been tolerably favourable, and vegetation being forward, many cattle are already turned out to graſs, which gives us a hope, that the butcher markets will be earlier ſupplied with graſs beef than laſt year. Turnips are getting into flour, and becoming of little value for the fattening of ſtock, eſpecially where there is graſs. Lean cattle are to all appearance not wanting in quantity, but like as in moſt other articles, the quantity is exceeded by the demand; and I am certain, that ſince I was a farmer, they never ſold at ſuch extravagant prices. It ought to be recorded, that a jobber near Halifax declared in a public company, that he had ſold 40 long horned cows for 900l. Sterling, and ſeveral lots at 20l. per head beſides.

Fat cattle in our markets are worth from 10s. to 12s. per ſtone of 14 lb. according to quality; beef is retailed from 8d. to 10d. per lb. averdupoiſe; mutton, 8d.; pork and veal much the ſame; wheat, 55s. to 58s. per load, of 3 buſhels; beans, 30s. to 35s. per ditto; barley, 80s. to 84s. and oats, 40s. to 60s. both per quarter of 8 buſhels; wheat at preſent is rather a dull article.

Extract of a Letter from London, March 30th.

have had a very mild winter and ſpring, and the differ-
:rations of huſbandry in the counties round London, are
it forwardneſs, the moſt part of the ſeed being got into
)und in fine order. The quantity of wheat ſown is much
r than in former years. In Middleſex, the ſtrong clays,
are in general under alternate crops of beans and wheat,
s year full two-thirds in wheat, and the young crop pro-
well. The early field-peaſe for the London market, are
)rward, and at preſent promiſe a luxuriant crop.

have had full markets of grain for two months paſt,
rice of oats has been coming down ſlowly. Wheat has
uctuating in price; a month ago it ſold as high as 9l. 9s.
arter; ſince which it has been at 8l. to 8l. 4s. and is now
10s. to 9l. 4s. for fine Engliſh wheat. Barleys of all ſorts
een very high, but are now looking downwards at this
market; they are from 5s. to 7s. lower than laſt week.
are about 10s. lower than a month ago. Hog-peaſe
een nearly ſtationary. Graſs-ſeeds fluctuating much; at
10s. per cwt. higher than the preſent prices. For 2 years
)arſley has been ſown as a paſture-graſs for ſheep: The
on parſley is preferred to the curled, being more hardy.
rices of butcher-meat have been very high. To-day there
en a great ſhew of both cattle and ſheep in Smithfield,
have ſold at a ſmall reduction of price from thoſe for-
given. The price of hay is coming down. Straw is
:rably advanced within the laſt three weeks. The pota-
n general, have turned out but very ordinary. There
en a conſiderable quantity of American flour lately ſold.
)exed you have the current prices of grain, ſeeds, but-
)eat, &c. at this day's market.

h wheat 8l. 10s. to 9l. 4s.
;n (red wheat) 6l. 6s. to
14s.
)ats 35s. to 42s.
l's 44s. to 48s.
white ditto for mealing,
. to 50s.
' 42s. to 92s.
)eans 56s. to 64s.
ditto 66s. to 70s.
)eaſe 74s. to 78s.
malt 50s. to 76s.

Pale ditto 84s. to 95s.
Flour 6l. 10s. per ſack.
American 80s. to 89s. per barrel.
Spring tares 16s. to 17s. per buſhel.
Boiling peaſe 100s. to 115s.
Hay 5l. 10s. to 6l. per load.
Straw 1s. 6d. to 1s. 8d. per truſs.
Rye-graſs 40s. to 48s. per quarter.

Clover Seeds.

Red 84s. to 150s. per cwt.
White 80s. to 100s.
Trefoil 46s. to 56s.
Turnip-ſeed 42s. per buſhel.
Burnet-ſeed 2s. per lb.
Parſley 16s. per buſhel.
Curled do. 20s. do.

Beef 5s. to 6s. 6d. per ſtone of 8 lb.
Mutton 6s. 6d. to 8s.
Veal 6s. to 8s. 6d.
Pork 6s. 6d. to 7s.

Retail.

Beef 10d. to 10½d.
Mutton 11d. and 12d.
Veal 12d. to 14d.

Northumberland Quarterly Report.

The laſt three months have been uncommonly favourable for agricultural operations. The ſowing of beans and peaſe commenced the firſt week in February: Towards the middle of the month, an interruption of a few days took place, occaſioned by a ſevere froſt, which gave way about the 21ſt; ſince that period, we have had one of the fineſt ſeed-times, for all kinds of grain, ever remembered, and the only lands now remaining unſown are a few patches, on which the turnips are yet ſtanding. The quantity of land covered with wheat is greater than ever was known in this diſtrict; for, beſides the whole of the ſummer-fallows, almoſt every acre of turnip-land has been ſown with wheat, as faſt as the grounds were cleared, which has conſiderably diminiſhed the extent of the barley land.

The high price of ſeed-oats made it a hazardous game to plough out indifferent graſs-lands; of courſe, they have been ſuffered to remain as they were, and the very beſt lands are ploughed out in lieu of them: So much good land was probably never ſown with oats, in this diſtrict, in one ſeaſon: When theſe circumſtances are combined with the very fine ſeed-time and excellent ſtate the land was in at the time of ſowing, together with the remarkable fine weather ſince, and continuing at preſent, there is every reaſon to hope for an abundant harveſt, and in which hope we are encouraged by the healthy and promiſing appearance of the growing crops, particularly the wheats.

The clover and artificial graſſes are in a greater ſtate of forwardneſs, and more luxuriant upon the dry lands at preſent, than, in ſome years, upon the firſt and ſecond week of May. The old graſs-lands are alſo ſpringing with a vigour and cloſeneſs I ſeldom remember to have noticed.

The turnips have ſtood the winter very well; the few that remain are getting into flower, and declining in value.

Hay and ſtraw are both very ſcarce, the former ſelling from 7l. to 8l. a ton. Many farmers have no ſtraw left.

This is a diſtrict of large farms, the natural ſource for the ſupply of the ſummer markets with grain; but I am ſorry to add, that the prices have been ſo tempting through the winter,

he ſtack-yards ſhew no ſigns of abundance, and wear a very
ent aſpect to what they generally do at this time of year;
he quantity for the ſupply of the ſummer markets, I am
, will be found conſiderably deficient. If we have not an
harveſt, God knows what may be the conſequences.
e demand for fat ſtock has been increaſing through the
r; and the Leeds, Wakefield, and Mancheſter dealers have
repeatedly out, and purchaſed great numbers of both cattle
heep; a certain ſign that there is a ſcarcity nearer home.
: that are good fat are ſold for 9s. a ſtone, ſink. and ſheep
L. per pound, ſink. Such prices occaſion a great many half-
ttle to be killed, which ought to have been kept on for the
er markets. Hence the proſpect of a ſcanty ſupply and
rice of butcher-meat through the ſummer.

Prices of Corn.

ent -	18s.	to	19s.	per buſhel, Wincheſter.
ley -	9s.	to	10s.	Do.
s -	5s.	to	7s.	Do.
for ſeed	8s.	to	10s.	Do.
ns & peaſe	10s.	to	13s.	Do.
atoes -	4s.	to	5s.	Do.

, 1801.

xtract of a Letter from Ripon (Yorkſhire), April 4.

s expectations entertained when I laſt wrote you have not
ealiſed; as grain, ſince that time, has advanced conſider-
nd there is no proſpect of its being lower through the ſum-
onths. Our ſpring ſeed work is nearly finiſhed, and the
as ſown in excellent order. Wheat, upon laſt year's fal-
as a promiſing appearance; an additional quantity was
his ſpring, after turnips. Animal food, of all ſorts, is at
t high prices; but I hope, if the ſeaſon continues favour-
hat markets will return to reaſonable rates.
: current prices of produce are: Wheat, 17s. 6d. to 19s.;
, 10s. 6d. to 15s.; Oats, 6s. 3d. to 8s.; Beans, 9s. 6d. to
d.; Grey Peaſe 9s. to 11s. per buſhel, above one-twentieth
than Wincheſter. Beef, d. to 9d; Mutton, 8d.; Veal,
Pork, 8½d; Lamb, 12d; Butter, 15d. to 18d. per pound,
es, 4s. to 5s. 6d. per buſhel.
: lambing-ſeaſon has been favourable, and we have a good
ty of lambs.

Extract of a Letter from Newcastle, April 4.

Our market was indifferently supplied with wheat this day; yet the sale was dull; best Northumberland wheat did not sell higher than 148s. per quarter: Foreign red, from 108s. to 128s. Rye was in demand, and sold from 100s. to 107s. Barley was rather lower than last day, the demand being inconsiderable. Oats also declined in price; those called *feed-oats* being from 30s. to 36s., and *mealing ones* from 38s. to 48s. Beans from 64s. to 74s. and hog-pease, 68s. to 76s. all per quarter. Fine flour, 112s. to 115s. per sack.

Extract of a Letter from Hull, April 8.

We attended the market on the 28th ult. with intention of writing you then, but finding every thing very flat, falling prices, &c., therefore deferred writing till this week, as the communication would not be too late. We attended yesterday, and found the state of markets much the same as last week, except for a few samples of home wheat; but foreign grain was the principal supply.

Prices.

Tuesday March 31.		Tuesday April 7.	
Wheat	115s. to 136s. Qr.	Wheat	100s. to 130s. Qr.
Barley	65s. to 68s.	Barley	60s. to 65s.
Oats	to 50s.	Oats	38s. to 50s.
Beans	68s. to 70s.	Beans not saleable.	

Little business done on either day.

Butcher's meat 8d. to 10d. per lb.
Butter 18d. per lb.
Flour 4s. 6d. to 7s. per st.
Ditto American 5l. per barrel.

Linseed 68s. to 73s. qr.	Rapeseed none at market.
Do. cakes 14l. 14s. ton.	Do. cakes 8l. ton.

Hay 5l. ton. Straw 50s. ton.

Good supply of fish, sells from 2d. to 5d per lb.

The soup subscriptions are still kept up, which are a great relief to the poor during such distressing times; the quantity delivered is much increased since our last account. Every thing in the country favourable in appearance. Grain and other articles of provision expected lower.

ported, from 20th December 1800, to 16th March 1801, as per Cuſtom Houſe Liſt.

Wheat	10,073 qrs.	Oats	3,860 qrs.
Beans	161 do.	Peaſe	1,241 do.
Rye	178 do.	Linſeed	361 do.
Barley	2,158 do.	Rapeſeed	769 do.

	Tons.	cwt.	qrs.	lbs.	
Indian meal	4	18	3	15	
Wheat flour	0	9	1	18	
Linſeed cakes	6	0	0	0	and 1000 cakes.
Rapeſeed do.	-	-	-		9,036 do.

Several arrivals of corn and flour that we cannot yet get rticulars of, from Hamburgh, Bremen, Holland, America,

The pamphlet on the *Grub* we have got, which we will ſend u by ſome way in time for your next Number. We hear of ots in various parts of the country. The populace here keep uiet. Poor's rates increaſing very faſt.

LONDON—March 30.

AVERAGE PRICES OF CORN.

Current Prices of Grain for the week.

Wincheſter Meaſure of 8 buſhels.

Friday.		Monday.	
Wheat	100s. to 160s.	Wheat	100s. to 160s.
Fine ditto	176s. to 178s.	Fine ditto	176s. to 178s.
Dantzic	159s. to 165s.	Superfine	176s. to 180s.
Rye -	70s. to 84s.	Rye	80s. to 104s.
Fine ditto	100s.	Fine ditto	104s.
Stained barley	45s. to 68s.	Stained barley	46s. to 68s.
Malting ditto	68s. to 92s.	Malting ditto	62s. to 92s.
Fine ditto	86s. to 94s.	Fine ditto	86s. to 94s.
Brown Malt	76s. to 95s.	Brown Malt	86s. to 95s.
Pale ditto	80s. to 90s.	Pale ditto	80s. to 90s.
Fine ditto	90s. to 100s.	Fine ditto	90s. to 100s.
Hog Peaſe	60s. to 74s.	Hog Peaſe	66s to 74s.
Boilers	98s. to 112s.	Boilers	100s. to 112s.
Fine ditto	112s. to 114s.	Fine ditto	112s. to 114s.
Fine Suffolks	104s. to 115s.	Fine Suffolks	104s. to 115s.
Fine Pearls	112s. to 114s	Fine Pearls	112s. to 114s.
Small Beans	62s. to 72s.	Small Beans	62s to 72s.
Tick Beans	52s. to 55s.	Tick Beans	50s. to 56s.
Kiln-dried ditto	62s. to 67s.	Kiln-dried ditto	52s. to 67s.
Oats	36s. to 44s.	Fine Oats	36s. to 44s.
Fine Polands	30s. to 50s.	Fine Polands	48s. to 50s.

Official Return of Flour, Manſion-Houſe, Tueſday, March including from the 14th of March to the 20th of March

Total 7,710 ſacks.—Average price 129s. 9½d.—8s. lower than laſt return.

Average Prices of Corn per Quarter.

Great Britain, for week ending March 21.

	Eng. & Wales	Scotland.		Eng. & Wales.	Scotl
Wheat	133s. 2d.	127s. 3d.	Beans	80s. 8d.	86s.
Rye	111s. 3d.	76s. 8d.	Peaſe	90s. od.	87s.
Barley	90s. 7d.	65s. 4d.	Oat-meal	83s. 7d.	43s
Oats	47s. 2d.	49s. 1d.	Big	os. od.	68s.

Hay and Straw for the week.

	Borough.	St James's.	Whitechapel
	L. s. L. s.	L. s. L. s.	L. s. L.
O. Hay	5 8 to 6 0	Hay 5 5 to 6 6	Hay 4 10 to 6
Clover	5 10 to 6 6	Clov. 0 0 to 0 0	Clov. 6 6 to 6
Straw	2 8 to 3 6	Straw 2 8 to 3 0	Straw 2 10 to 2

Smithfield.

Excluſive of the offal, which conſiſts of head, entrails, hide, is worth about 1d. per lib.—Per ſtone of 8 lib.

	Friday.	Monday.
Beef	5s. od. to 7s. od.	Beef - 5s. od. to 6s
Mutton	6s. 6d. to 8s. od.	Mutton - 6s. od. to 7s
Lamb	os. od to os. od.	Lamb - os. od. to os
Veal	6s. od. to 8s. 6d	Veal - 6s. 6d. to 7s
Pork	6s. 4d. to 8s. od.	Pork - 6s. 5d. to 7s

Friday—Beaſt 850—Sheep 2000.
Monday—Beaſt 2100—Sheep 9760—Pig 320.

Newgate and Leadenhall.

	Saturday.	Saturday.
Lamb	os. od. to os. od.	Beef - 5s. 4d. to 6s.
Veal	6s. od. to 7s od.	D. in S. 5s. 4d. to 5s.
Pork	7s. od. to 7s. 8d.	Mutton - 6s. od. to 6s.

Sheep Skins.—Friday, March 27.

Sheep	4s. od. to 6s. 3d.	Lamb	os. od. to 0s.

Price of Tallow in London.

Only market is on Friday.

	s.	d.
nes's market	4	9
market	4	8½
chapel market	4	8
	13	1½
verage Price	4	8½

	per cwt.
Town tallow	80s. od. to 00s.
Yellow Ruſſia	78s. od. to 79s.
White do.	77s. od. to 00s.
Melted ſtuff	64s. od. to 64s.
Ditto rough	42s. od. to 48s.
Graves	19s. od. to 00s.
Good dregs	13s. od. to 00s.
Yellow ſoap	77s. od. to 86s.
Mottled ſoap	94s. od. to 00s.
Curd ditto	98s. od. to 00s.

Candles - - 12s. per dozen.
Moulds - - 13s. per dozen.
The above price is to the trade.

POSTSCRIPT TO SCOTS INTELLIGENCE.

Extract of a Letter from Haddington, April 10th.

ır market was this day tolerably well ſupplied with all of grain, eſpecially peaſe and beans. Wheat ſold ſlowly, at prices rather reduced; higheſt 73s. but much of what preſented was of inferior quality, conſequently, the average low that of laſt day; barley and oats ſold at much about ame rates as for ſome markets paſt; viz. the firſt from 50s.)s. the latter from 34s. to 42s. Beans and peaſe were from to 45s. Some clean peaſe of ſuperior quality ſold higher. s very little grain is ſold of late at the ſea-ports, almoſt the e produce of the country is now *pitched* in the market here, h of courſe preſents a better ſhow than appears in the moſt uctive ſeaſons. The ſtack yards being now well cleared, ı us the aſſurance that our ſupply will in a little time be conably diminiſhed.

aſt week we experienced uncommon warm weather, which e the young wheats and graſſes aſſume a thriving aſpect. iaturday, (April 4.) a change took place, and ſince that day. veather has been remarkably cold, and unfavourable to vetion. Some of the wheats upon the thin ſoils are beginning ok unhealthy, and the young graſſes are conſiderably injured. y a letter from London we learn, that the premium offered he Society of Arts, &c. for the greateſt quantity of land ı with wheat in ſpring 1800, is adjudged to Mr Brown, ;er at Markle in this county. Several eſſays from this hbourhood were tranſmitted to the Board of Agriculture, cting the moſt proper method of breaking up graſs land; it is probable that ſome of them will afterwards be ſent you ıſertion in the Magazine.

FIARS OF GRAIN IN SCOTLAND, CROP 1800.

East-Lothian.

Per boll Linlithgow measure.

	1st.	2d.	3d.
Wheat	67s. 3¼d.	63s 1¼d.	55s. 3¼d.
Barley	52s. 5d.	46s. 11½d.	42s. 4½d.
Oats	38s 11½d.	35s. 8d.	30s. 9½d.
Pease	46s. 2½d.	41s. 6d.	36s. 8½d.

N. B No Fiars are struck in East-Lothian for beans or meal. The value of wheat, taken in the proof, amount about 26,000l.

Fife.

White Wheat 55s.
Red ditto 54s.
Barley 42s.
Oats 34s.
Oat-meal by weight 42s.
Oat-meal by measure 4
Beans and pease 40s.
Malt 47s.
Rye 32s.

Kincardine.

Oat-meal 43s.
Bear with fodder 60s.
Ditto without fodder 47s.
Oats with fodder 40s.
Oats without fodder 30s
Pease with fodder 50s.
Ditto without fodder 4
Wheat 65s.

Mid-Lothian.

Best Wheat 58s. 9d.
Second ditto 5 s. 6d.
Best barley 40s. 7d.
Second ditto 35s. 7d.
Third ditto 32s.
Best oats 33s. 2d.
Second ditto 30s. 6d.
Best oat-meal, 8 stone 2d.
Pease and beans 41s. 3d

Aberdeen.

Great oats with fodder 55s.
Ditto without fodder 35s.
Brocked oats with fodder 46s. 8d.
Ditto without fodder, 26s. 8d.
Bear with fodder, 60s.
Ware bear with fodder 54s.
Ditto without fodder 35s.
Farm bear with fodder 41s.
White meal per 9 stone 41s. 8d.
Farm meal per 8 stone
Small oats with fodder 6d.
Ditto without fodder 17s
Market meal 45s.
Pease 35s.
Wheat 55s.
Rye 40s.

ge-price of corn per quarter in Scotland, for the week ending March 21ſt, per quarter of 8 buſhels.

27s. 9d.	Beans 86s. 10d.
5s. 4d.	Peaſe 87s. 1d.
. 8d.	Oat-meal per boll 43s. 5d.
s. 1d.	Big 68s.

OBITUARY.

ry 29, 1801.—At Edinburgh, Mr JAMES SYMINGTON, bliſher of this Magazine.—Mr Symmington was of an and conciliatory diſpoſition, ſteadily attached to buſi- d greatly beloved by thoſe who had the pleaſure of his tance When the propoſal was made to him of attempt- Agricultural Publication, he chearfully complied with itations of his friends, and hazarded the riſk of an un- g which, at the outſet, was precarious and uncertain. rk, as will be ſeen by the introductory addreſs to this , is now transferred in favours of Mr CONSTABLE.

h 8.—John Thompſon, Eſq. of Balbeg, factor to A- r Murray, Eſq. of Broughton

aughton, Yorkſhire, after a few hours illneſs, Mr G. a reſpectable farmer.

s 100th year, Mr Congreve, farmer, of Deeping Fen, ſhire

aby, Rutlandſhire, in the prime of life, Mr J. Geary, and grazier.

andford, Oxfordſhire, aged 80, Mr J. Fry, farmer.

Borg-Apton, Norfolk, aged 71, Mr Edward Bound, there.

lilford, near Saliſbury, Wiltſhire, Mr R. Coe, an emi- mer.

NOTES TO CORRESPONDENTS.

hank the Gentleman who kindly favoured us with "*E* *Notes on Rural Affairs,*" lately publiſhed at Philadel- hich ſhall be noticed in our next number. Thoſe who y agricultural work reviewed in the FARMER'S MAGAZINE,

will take the trouble of ſending a copy thereof to the publiſher's ſhop, and it will be taken up in courſe.

The *Clydeſdale Farmer's* letter under conſideration.

Our *Yorkſhire Friend's* communication arrived too late for this number.

Agreſtis's valuable paper is received. He will notice that the ſubject is foreſtalled by two other Correſpondents, but room is ſtill left for his judicious remarks. A continuance of his correſpondence is reſpectfully ſolicited.

The *North Country Farmer* is a ſhrewd fellow. His obſervations ſhall not be neglected.

An Eſſay upon *Lime Huſbandry* is received, which ſhall be laid before the public, with all poſſible ſpeed.

A letter from Aberdeenſhire, "*on the moſt proper Method of forwarding Improvements*," is juſt come to hand.

Some of our Friends, to whoſe ſuperior judgment we pay much deference, having pointed out the propriety of changing the period of publication, the Public are reſpectfully informed, that the Magazine will in future be publiſhed in the firſt week of February, May, Auguſt, and November, which will permit us to wind up the tranſactions of each ſeaſon in a more complete way than practicable under our original plan, particularly for this northern part of the kingdom.

No. 7. will be publiſhed on Monday, 3d Auguſt It is entreated that Quarterly Reports and letters of intelligence, may be tranſmitted on or before the 22d July, as much inconvenience ariſes when the tranſmiſſion is delayed till within a few days of publication. Poſtage being now a ſerious buſineſs, it is anxiouſly hoped that our eſtabliſhed correſpondents will not require a *flapper* to remind them of the time when their favours are expected.

THE

FARMER'S MAGAZINE:

MONDAY, AUGUST 3. 1801.

(N°. VII.)

PART I.

ORIGINAL COMMUNICATIONS.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On the Value of Turnips, Roota Baga, Potatoes, Yams, &c. as Subſtitutes for Grain in the Feeding of Horſes, &c.

GENTLEMEN,

THE great riſe upon the rent of land, that has lately taken place in North Britain, while it ſerves as a ſtimulus to exertion in the way of improvement, ought at the ſame time to ſuggeſt to the farmer the means of conducting his operations in the cheapeſt and moſt economical manner. Under the preſent mode of farm-management, upwards of two-fifths of the produce, even of the beſt farms, is required for the farmer's own purpoſes, and of that quantity a very conſiderable proportion is uſed by the horſes; the remaining three-fifths being all he has to depend upon for the payment of his rent, maintenance of his family, intereſt of capital, and numerous caſualties; a proportion little more than adequate to theſe purpoſes, even in good years, and in the moſt favoured ſituations, and certainly very unequal to them in bad ſeaſons, of which the experience of the two laſt, which it is to be hoped will not ſoon be equalled in Britain, is a convincing

proof; for, notwithſtanding the uncommon high price of grain, many farmers, in place of being benefited thereby, were, in conſequence of the deficiency of their crops, conſiderable loſers, eſpecially upon that of 1799, and even upon that of 1800. The numbers who have benefited by the high prices, are few, compared with thoſe who have loſt by the deficiency of the crop, and the great additional rent paid to the landlord, in caſes where the whole, or a part, was payable in grain.

As the ſupport of horſes, and other ſtock, upon a farm, conſtitutes ſo material a part of the expence attending agricultural operations, it is a matter deſerving the moſt ſerious attention, whether, without diminiſhing the ſtrength, or leſſening the value of the animals, they can be fed at a cheaper rate than they are at preſent.

Neceſſity, we are told, is at once the parent of induſtry and economy. Upon many occaſions it has been ſo, both with nations and individuals, as we meet with numerous inſtances of men who formerly had been diſſipated and thoughtleſs in the extreme, becoming careful and ſaving, from the preſſure of misfortunes; and of nations, where profuſion and expence had reached their ultimate height, becoming frugal and economical, from ſevere public calamities.

The ſituation of Britain, for the laſt three years, furniſhes a ſtrong proof of the truth of this obſervation; perſons of all ranks having been under the neceſſity of practiſing an economy, which, in the more fortunate periods of our hiſtory, they would not have thought of, and which, it is to be hoped, will not forſake them with an alteration of times. Of theſe plans of economy, perhaps none is more important, or promiſes more laſting advantages to the country, than the methods that have lately been fallen upon to ſubſiſt the horſes and working ſtock, upon articles that admit of being generally introduced as ſubſtitutes for grain, by which the farmers in thoſe diſtricts where the practice has been adopted, have been enabled, with profit to themſelves, to bring to market a conſiderable quantity of grain, which, under the ordinary way of feeding, would have been given to their horſes.

This ſaving having been attended with no loſs of labour, or diſadvantage to the animals, the continuance and extenſion of the ſyſtem is a matter of high import to the public, and, if carried to the extent of which it ſeems capable, bids fair to form a new æra in the hiſtory of Britiſh agriculture, eſpe-

cially as all the articles propoſed to be employed as ſubſtitutes for grain, may be cultivated with advantage, upon lands that would otherwiſe be in fallow, of courſe in an unproductive ſtate.

The articles that have been chiefly employed, are turnips, roota baga, yams, potatoes, &c. all of which, under proper management, have been found to anſwer well. The turnips have chiefly been given in a raw ſtate, withholding about one-half the uſual allowance of corn, and in moſt inſtances where this has been done, the animals have got almoſt immediately into good condition and ſpirits, and done their work with more apparent eaſe than when fed in the ordinary way, with the full allowance of grain, with the additional advantage of their being entirely free from the frequent bowel-complaints to which they are liable, when fed entirely upon dry food.

Where the roota baga has been uſed, little grain has been neceſſary, and in ſome inſtances none has been given; though I am ſatisfied, that along with both this root and turnips, a proportion of well-broken grain ſhould be uſed, eſpecially in a firſt experiment, and continued till the animals are habituated to the new food. The ſame plan ſhould be followed when potatoes or yams are given in a raw ſtate; but, when either the roota baga, yams, potatoes, &c. are boiled, which has been done in a few inſtances, no corn appears neceſſary. This mode, therefore, as it is attended with the ſaving of the whole grain, is unqueſtionably the beſt, and ought to be adopted in every ſituation where a ſufficiency of theſe roots can be cultivated.

It will no doubt be urged by ſome farmers, whoſe indolence and inattention to theſe matters deſerve reprehenſion, that the trouble of boiling a ſufficient quantity for the whole working ſtock of a large farm, will be ſo great, as, in many inſtances, to render the plan impracticable; and certainly, at firſt view, it appears a weighty undertaking to boil daily a ſufficient quantity of *potatoes*, *yams*, *roota baga*, or *turnips*, for 20 or 30 horſes; but when the great ſaving of grain is conſidered, the trouble will weigh light in the ſcale, as, even in the ordinary way of boiling, an old man, or a boy, *unfit* for almoſt any other employment, will be able to do the work; but when it is conſidered, with what eaſe and cheapneſs ſteam can be applied to that purpoſe, the objection will entirely diſappear. The operation of boiling is known to deprive theſe roots of a very great proportion of their water;

juices, leaving the moſt nutritive and farinaceous parts behind. The excluſion of theſe juices is however more completely effected by ſteam, which, as the application of it is at once cheaper and leſs troubleſome, ought to be preferred to common boiling.

Amongſt good farmers, during the greateſt part of the ſeaſon, each horſe is allowed from a peck to a peck and a half of oats daily; but allowing only a peck to each throughout the year, upon a farm where 32 horſes are kept, the daily conſumption will be two bolls, or 730 bolls per annum; now, if upon ſuch a farm the ſubſtitution of any of the articles mentioned, ſhall render only one-half the grain neceſſary, the ſaving in conſequence will be 365 bolls per annum, a calculation by no means overſtrained, and which when applied to the whole of the working ſtock in theſe kingdoms, holds out a proſpect of great public benefit, and promiſes, in a very material degree, to leſſen our dependence upon other nations for bread corn.

From very careful trials, it appears that, in caſes where only a ſmall quantity of theſe roots is given, the health and condition of the animals are improved by giving them in a raw ſtate, as, in that form, they have a kindly effect upon the bowels; and, beſides promoting the digeſtion of the grain and ſtraw, which they do in a remarkable degree, obviate the coſtiveneſs and other complaints incident to winter-feeding; but, in caſes where they have formed the chief article of food, boiling has been found indiſpenſible, as, in that ſtate, a ſmaller quantity than what is uſually given raw will not only ſupport but fatten the animals, a thing ſtrongly exemplified in the feeding of hogs: Theſe animals can be reared to the full ſize upon raw potatoes, yams, carrots, roota baga, &c. and may be kept in good health for any length of time without the aid of any other food; under that management, however, they will not fatten, but, when the roots are boiled, they immediately begin to feed, and ſoon become fat, upon a ſmaller allowance than what was neceſſary to keep them alive in a raw ſtate.

Carrots having been little cultivated in Scotland for theſe purpoſes, I am unable to ſpeak of them from much experience; in the few trials, however, that I have known, the ſucceſs has been ſuch as to encourage more extenſive attempts, which, even with the moſt prudent and circumſpect farmers, are abundantly warranted, by the ſucceſsful practice of many of the firſt counties of England.

Parſnips are alſo deſerving of attention, from the eaſe with which they are cultivated, and the great quantity of ſaccharine or nouriſhing matter they are known to contain, and which is certainly in a much greater proportion than in almoſt any other vegetable with which we are at preſent acquainted.

Great as the advantage attending the uſe of theſe roots for the feeding of working horſes appears to be, their importance is farther increaſed by the conſideration of their being extended to the feeding of young horſes, milch cows, winterers, young cattle, and ſheep. Young horſes eat them readily, and with great reliſh; and a very ſmall allowance, in addition to the dry food upon which they are generally kept during the winter, puts them into as good condition and ſpirits as they generally are when fed upon graſs during the ſummer. The caſe is the ſame with young cattle and ſheep, all of whom are not only ſupported in health and vigour, but kept in a growing ſtate throughout the whole year; a circumſtance of great importance, though hitherto very little attended to in the rearing of young animals, as, in a great majority of caſes, they are fed in ſuch a manner as to be barely kept alive; during the winter months, owing to that treatment, their growth is ſtopt, they loſe the little fleſh they had acquired during the preceding ſummer, become ſtinted and hyde-bound, and, when the ſpring arrives, are in a ſtate ſo wretched, that many of them die, and thoſe who ſurvive require a great part of the enſuing ſummer to put them into a ſtate fit to reſume their growth, in which they can make little progreſs before the winter again ſets in, and checks it; in that way, four or five years are required to bring them to the ſize that others of the ſame ſpecies generally attain in half that time, under different management.

For winterers, or ſtraw-yard cattle, intended for next ſummer's graſs, the advantage is alſo great, as a very ſmall allowance given daily, in addition to the ſtraw upon which they are commonly fed, keeps them in ſuch condition, that, when the ſpring arrives, and they are put to graſs, they fatten in half the time that beaſts of the ſame kind commonly do when kept entirely upon ſtraw through the winter, owing evidently to their bowels being habituated to ſoft juicy food. In that way, they eſcape the ſcouring to which the others are liable, and which not only prevents the ſtrongeſt of them from feeding for ſeveral weeks after they are turned out, but, in caſes where they are very weak, carries them off entirely. Young ſheep,

known by the name of hogs, are alſo liable to the ſame diſeaſe, which is found to be prevented by the ſame means. In the feeding of milch cows, trials of the moſt ſatisfactory kind have been made, the quantity of milk being greatly increaſed without any apparent injury to the quality, unleſs where turnips alone have been given; even in that caſe, it is prevented by boiling or giving the cows a little nitre amongſt their other food.

The advantages that may ariſe from the uſe of theſe roots being generally adopted over the whole kingdom, in the way above mentioned, will be extremely obvious to every intelligent proprietor and farmer. It would be very conſiderable, even if they were cultivated upon lands that would otherwiſe have been employed in raiſing grain; but when it is conſidered what a large proportion of almoſt every arable farm is yearly under a naked fallow, conſequently in an unproductive ſtate, the growth of theſe articles upon ſuch lands may be juſtly viewed as the creation of as much grain as their uſe will produce a ſaving of, and which would otherwiſe have had no exiſtence; to which if we add, the ſaving that will ariſe from breaking the proportion of grain continued to be given in conjunction with theſe roots—the advantage to the community will appear very great. From knowing pretty nearly the numbers of horſes, &c. employed in agricultural and other labours, calculations, founded upon good *data*, might have been given, that would aſtoniſh and almoſt exceed the belief of moſt readers; but, as theſe things are generally read with a degree of diſtruſt, I think it better to omit them, perfectly convinced that enough has been ſaid to fix the attention of every perſon, having an intereſt in the cultivation of the ſoil, upon the ſubject.

Yours,

A. Z.

FOR THE FARMER'S MAGAZINE.

Hints as to the Advantages of old Paſtures, and on the Converſion of Graſs Lands into Tillage. By Sir JOHN SINCLAIR, Bart. M. P.

INTRODUCTION.

HAVING correſponded with ſome intelligent proprietors, and practical farmers, on the important queſtion recommended by

the Board of Agriculture to the attention of the public, namely, "*The Propriety of converting Paſture Land into Tillage,*" I have thought it a duty incumbent upon me, as a member of the Board, and a well-wiſher to the improvement of the country, to communicate the reſult of that correſpondence, as ſeveral of the obſervations tranſmitted to me on that ſubject, ſeemed to be of conſiderable importance.

I. *Advantages of old Paſtures.*

Before, however, the propriety of ploughing up old paſtures is diſcuſſed, it may be proper, in the firſt place, to point out ſome of the moſt important advantages to be derived from them.

1. The firſt advantage contended for is, that old paſtures anſwer better for making butter and cheeſe than artificial graſſes, and the idea is probably well founded. All ſeeds, particularly clovers, give the milk a ſtrong taſte, and although the quantity may be as great, or even greater, yet the quality is always worſe; it will caſt up leſs cream in proportion; the butter is leſs firm and waxy, and it will not keep ſo well. The cheeſe, alſo, is conſiderably inferior.

2. It is next aſſerted, that old paſtures are better calculated for feeding cattle and ſheep; but this can only be admitted with certain qualifications. In the opinion of that reſpectable farmer, Mr. Culley, (who has had 50 years experience in the grazing line) "Artificial graſſes, ſuited to the different ſoils, will be found to anſwer better than old graſs, for feeding cattle, ewes, and lambs, during the beginning, and for the greater part of the ſummer; and even during the autumn, artificial graſſes will feed ewes and lambs better than old graſſes; whereas, on the other hand, fogs (or aftermaths, as they are called in the ſouthern parts of England) from old graſs, will certainly feed cattle better in the autumn, the richneſs, luxuriance, and ſtrength of ſuch herbage, being better calculated for their conſtitutions." It is believed, indeed, that it is hardly poſſible to fatten a large ox, to any degree of perfection, on herbage alone, without ſuch paſtures.

3. It is farther contended, that the hay made from old graſs, though not ſo bulky, yet is of a better quality, and will keep longer in a good condition, than hay made from artificial graſſes, particularly from a mixture of clover and rye-graſs.

II. *Deſcription of the Lands that ought to be kept perpetually in Graſs.*

As old paſtures are attended with ſuch peculiar advantages, it is deſirable to know, what deſcription of land ought to be kept perpetually in graſs. It is certain that there are many old grazing paſtures, which can afford to pay a conſiderable permanent rent in graſs, even at a diſtance from any populous town, the value of which might be reduced, if ſubjected to the plough. It is the opinion of Mr. Culley, that ſoft heavy loams, with a clayey or marley bottom or ſubſtratum, are univerſally injured by ploughing. Water-meadows alſo, ſhould never be ploughed, as they furniſh ſo large and valuable a produce in ſpring, in ſummer, and in autumn, without any other help than water, whilſt the manure made from that produce, goes to enrich the reſt of the farm.

With theſe exceptions, and that of land apt to be overflowed, there is every reaſon to believe, that old paſtures may occaſionally be converted, with public advantage, and private benefit, into arable land.

III. *Obſtacles to the Converſion of old Paſtures into Tillage.*

Before, however, the converſion of old paſtures into tillage is recommended, it is right to conſider, what are the obſtacles which may ſtand in the way of ſuch converſion; for, unleſs they are removed, any recommendation to that effect would be uſeleſs. Theſe obſtacles are, 1. Tithes; and, 2. The reſtrictions of the landlord.

In regard to tithes, whilſt they continue undefined, they operate in a peculiar manner againſt the converſion of old graſs-lands into tillage, by depriving both the landlord and the tenant of ſo large a proportion of the profit to be derived from it; and as there is every reaſon to believe that a very conſiderable extent of land in England is kept perpetually in graſs, in order to avoid the payment of tithes in kind, is it not a moſt unfortunate circumſtance, that ſome means are not thought of, for commuting, on equitable terms, a right that operates injuriouſly to the agricultural intereſts of the country?

As to the reſtrictions of the landlord, they are often neceſſary for the protection of his property. But, in the courſe of the inquiry, it will probably be in the power of the Board, to point out the conditions, under which old paſtures

may be ploughed up, not only without detri- buſhel of rye- advantage to the landlord, and to the public. nds may do s require to be

IV. *Preparation of the Soil.*

The preparation for the tillage crops, may be conſider to under three heads: 1. Draining; 2. Paring and burning; nd, 3. Manuring.

In regard to *draining*, it ſhould be done effectually, before the land is attempted to be ploughed; for very poſſibly it may have been kept in paſture, on account of its wetneſs.

As to *paring* and *burning*, it is certainly a uſeful practice, where old graſs-lands are broken up, for it deſtroys numberleſs eggs and larvæ of inſects, which are extremely injurious to the ſucceeding crops, and it almoſt inſures the tenant from any damage he is otherwiſe likely to ſuſtain from wire-worms, grubs, &c. Indeed, where the land is rough with furze, buſhes, brambles, anthills, &c. it is hardly to be diſpenſed with. If the land is ſo ſmooth and friable, that paring and burning is not neceſſary, the beſt plan to adopt is, *to double-plough it*, by means of two ploughs following each other, the firſt plough taking off a thin ſurface of about three inches, and the ſecond going deeper in the ſame place; both furrows not to exceed ſix inches. Mr. Ducket's ſkim-coulter does the work at one operation. This plan is certainly the beſt to purſue, where paring and burning, from prejudice or any other circumſtance, will not be permitted.

As to *manuring*, if the land is not to be pared and burnt, lime might be ſpread on the ſurface ſome time before ploughing, in order to deſtroy grubs and inſects; but old paſture-lands are in general rich enough to be abundantly productive, without dung, until they are about to be laid down into permanent paſture.

V. *Courſe of Crops.*

The rotation of crops muſt depend upon the nature of the ſoil, and the manner in which it is prepared for cultivation.

If the land is pared and burnt early in the ſeaſon, turnips is the beſt article that can be ſown; and it is found by experience, that turnips thus raiſed, will go farther in feeding cattle or ſheep than any other. If it is late in the ſeaſon before the land is burnt, cole or cabbage may be adopted: if the land is broken up without being pared or burned, early oats will be found the moſt profitable crop, being ſo extreme-

II. *Description* ... and. Mr. Culley states, oats, suited for the dif- eys of strong loam, *Polish* n that sort called *Church's* n lighter soils, the *Dutch*, d to answer best; but, on cies has been found compa- d from its having been ac- atoes, in one of the northern ceeding course, on dry soils, ght to be the prevailing green nay be added; and when the cabbages. The following rotation is pa... nded, on a lightish soil, by Sir Alexander Ramsay; ..., 1. Oats; 2. Turnips, with dung and lime; 3. Barley, with seeds; 4. Clover; 5. Wheat; 6. Turnips; 7. Barley and grass-seeds; and then to remain in pasture. This intelligent and respectable farmer is decidedly of opinion that a full rotation of 7 years is to be preferred to a shorter time, with a view of enabling the tenant to profit by his labour, and thoroughly to pulverize and reduce the soil; it may then be laid down in a husbandlike manner, enriched and not exhausted, and likely to produce both hay and pasture in abundance and perfection.

VI. *Management during the Rotation.*

When land of a light quality is laid down with turnips, sheep should be folded on them. If the land is strong or wet, the green crops grown thereon, ought to be drawn, and fed in some adjoining grass-field, or in sheds. If the land is in very high health and condition, some farmers would be inclined to cart off half the turnips, and to eat the rest on the ground, though it is not a plan to be universally recommended.

In regard to manuring, it may be proper to observe, that the dung and lime ought to be applied to the turnips, or other green crop, but never to the different sorts of grain.

VII. *Mode of laying down to Grass.*

Grass-seeds in general should be sown with the barley, or the crop succeeding turnips, or any other green crop that may be preferred: the *quantity* of grass-seeds must be governed by the state and quality of the soil. Old tillage-land requires,

in addition to the clover, three pecks, or one buſhel of rye-graſs ſeed per acre; whereas new ploughed lands may do with half that quantity, or even leſs. Heavy lands require from 10 lbs. to 14 lbs. of red clover, if they are not to be broken up again in one or two years; but if they are to remain in graſs, from 4 lbs. to 6 lbs. of marle-graſs or perennial red-clover, and 4 lbs. of white. All dry ſoils may have from 2 lbs. to 4 lbs. of hop or yellow clover ſeed per acre, in addition to the white clover ſeed, and the perennial red-clover, or marle-graſs already mentioned. The following plan is recommended by Mr. Bridge, (a reſpectable farmer in Dorſetſhire) for laying down land for permanent paſture; namely, to ſow from 6 lbs. to 7 lbs. of white-clover, ditto of marle-graſs, ditto of hop-clover, and one buſhel of the beſt Devonſhire rye-graſs, which reſembles much the Pacey rye-graſs. By this means, there is a perpetual feed for five or ſix years. The hop, clover, and rye-graſs flouriſh early in the ſpring; the marle-graſs is in perfection in July, when the other goes off; and the white-clover is in perfection in Auguſt, and continues during the remainder of the ſeaſon. In ſome meadows of very rich ſoil, perhaps lucerne ought to be preferred, and it would be of infinite importance to have it aſcertained to what extent that culture could be carried.

As to providing the ſeed, much muſt depend upon the character of the tenant; but as farmers in general are too fond of the plough, it is the ſafeſt plan for the landlord to provide the ſeeds, as it muſt be for his intereſt to procure the beſt that can be purchaſed, to prevent any neceſſity, from the unproductive ſtate of the graſs, to have again recourſe to tillage.

VIII. *Increaſe of Rent.*

It is evident, that any tenant would be willing and able to give an increaſe of rent, for the liberty of ploughing up old paſtures. What the addition ought to be, muſt be governed by the ſituation, the quality of the land, the price of grain, and other circumſtances. In Scotland double rent, and upwards, is not unuſual on a leaſe of four years. The Earl of Roſebery has lately let about 300 Scotch acres of old paſture, at that rate, ſome parts of which produce 8l. per

annum *. It had been paſtured, however, for more than 16 years, and was ſituated within eight miles of Edinburgh. The high rent payable for ſuch lands in Scotland may be attributed to the following circumſtances:

1. That land fit for tillage, is leſs abundant in the northern part of the iſland than in England. 2. That old paſtures are peculiarly well calculated for producing oats, the general food of the people †. 3. That ſuch lands are in general ſo rich as to require but little manure, conſequently the manure ariſing from the crops they produce may, in a great meaſure, be devoted to the improvement of the reſt of the farm. 4. That the tenants in Scotland are not ſubjected to the payment of tithes, nor of poor rates, or other taxes: And, 5. That there is either a greater ſpirit of ſpeculation among the Scotch farmers, or that they are contented with leſs profit than the Engliſh.

IX. *Conditions under which the Liberty of Ploughing may be granted.*

But the increaſe of rent is not the only particular that a landlord has to take under his conſideration, when he grants the liberty of ploughing up old paſtures. Unleſs care is taken, when they are broken up, that it is done under a proper ſyſtem of management, the execution of which is enforced by the ſtricteſt regulations, *the real value of the property may be materially injured.* The conditions, therefore, that ought to be ſtipulated by the landlord, is certainly not the leaſt important branch of this inquiry.

In conſidering the general nature of the conditions that ought to be required, I have derived much benefit from peruſing the articles which were obligingly communicated to me by the Earl of Roſebery, and, according to which, that noble Lord, in January 1801, let a conſiderable tract of old paſture, part of the eſtate of Dalmeny, in the neighbourhood of Edinburgh.

Art. 1. By this article the fields were to be ſet up to auction, and the higheſt bidder was to find ſecurity to fulfil the terms he had agreed to.

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* Equal to 6l. 8s. per Engliſh acre. In many inſtances, old paſture land would fetch in Scotland from 8l. to even 10l. per Engliſh acre.

† It appears, from the corn-tables, that wheat is almoſt always cheaper in Scotland than in England, and oats the reverſe.

Art. 2. The grounds were let for four years: 1ſt crop, *oats;* 2d crop, *turnips or other green crops;* (if a naked fallow, four ploughings;) 3d crop, *barley and graſs ſeeds*, with two or three ploughings; and 4th crop, *hay;* prohibiting wheat, hemp, flax, &c. under the penalty of 10l. per acre of additional rent.

Art. 3. The tenant to plough the land properly, to hoe and weed it, &c. to ſow with the third crop at leaſt one buſhel and a quarter, or one Scots firlot of rye graſs, 12 lbs. or 14 lbs. good red clover ſeed, and 4 lbs. white clover, and ſufficiently to harrow, ſtone, and roll the ſame, entirely at his own expence.

Art. 4. The tenant to have liberty to cut and carry away the foggage, or ſecond crop of graſs, in the fourth or laſt year, but not to paſture the ſame *, and to remove every article belonging to him, on or before the 1ſt of November 1804.

Art. 5. The tenant to preſerve the gates and fences, to keep the ditches, &c. clean and open, and to leave them in good condition at his removal; and, if neglected, the ſame to be done by the landlord, at the tenant's expence.

Art. 6. The tenant who ſhall be preferred, to ſign a proper deed or inſtrument, with a ſufficient ſurety, ſpecifying the terms agreed upon.

Art. 7. Accommodation given to the tenant, to ſtack and threſh the crop, under certain obligations, that he ſhall keep the barn and corn-yard in repair.

Art. 8. An arbiter appointed to determine all differences, the expence attending any diſpute, to be paid by the perſons againſt whom judgment ſhall be given.

Art. 9. Tenants to remove, without the neceſſity of previous notice, under certain penalties.

Art. 10. Power reſerved to the landlord, or to perſons he may appoint, to inſpect the fields from time to time, alſo to work coal and lime-ſtone, and other ſtones or gravel, to ſink or dig pits, to make roads, and to do every thing neceſſary for carrying on ſuch works, (allowing to the tenant the yearly value of the ground thus taken up, or rendered uſe-

* This reſtriction was intended for the preſervation of young fences; but where the fields are completely fencible, Lord Roſebery prefers obliging the tenant to paſture the ſecond crop of clover.

leſs); alſo, reſerving the power of carrying off wood and underwood, paying the damages ariſing therefrom.

It is evident, that under ſuch prudent conditions as theſe, if properly enforced, the moſt cautious landlord may ſuffer old paſture lands to be converted into tillage, without any material riſk of his property being thereby injured.

X. *On the Propriety of laying down ſome of the Tillage Land into Graſs.*

Wherever circumſtances will admit of it, the landlord would find it for his advantage, to lay down the ſame quantity of old arable land into paſture that is broken up from paſture, and rendered arable, by which change, the farm will, on the whole, be much improved; and conſequently it is for the intereſt of the landlord to conſent to the alteration. It is, at the ſame time, in the opinion of one of our moſt intelligent farmers, (Sir Alexander Ramſay), one of the moſt difficult operations in huſbandry, to lay down old tillage land, that has been for years under a ploughing ſyſtem, (as, under 1. fallow, 2. wheat, 3. beans, &c.) into permanent paſture. One rotation will not be ſufficient to produce good paſture; it may be found neceſſary to have two complete rounds of management, different from what the land has been accuſtomed to: As, 1. Turnips, cabbages, or ſummer-fallow; 2. Barley, with 12 lbs. of clover, and one-half buſhel of rye graſs, to each acre; 3. and 4. Clover to ſtand two years; 5. Clover ſtubbed, broke up for drilled beans or peaſe, according as the land is heavy or light; 6. Turnips with manure; 7. Barley and graſs ſeeds for permanent paſture. When the field in this courſe has been twice manured, it has never failed to produce good paſture, more eſpecially if care is taken, the firſt year, to feed it off with ſheep.

XI. *On the greater Productiveneſs of Arable compared to Paſture Lands.*

Having thus ſhortly ſtated, the manner in which old paſture lands may be converted into tillage, it may be proper briefly to explain, how much the public is intereſted in ſuch a converſion, in conſequence of the much greater quantity of food for man that is produced by land in tillage. According to Archdeacon Heſlop's comparative ſtatement lately publiſhed, the weight of food from an acre of arable, on the average of three years, a fallow year being included, is

nine and a half times greater than from an acre of feeding ſtock; and, according to the calculations of a very intelligent correſpondent of the Board, the Reverend Dr. Walker of Collinton, a Scots acre of land in paſture, fed with ſheep, produces only 120 lbs. weight of meat; whereas the ſame land will yield 1280 lbs. weight of oatmeal, or above ten times as much *. This is ſo important a circumſtance, in a public point of view, that it merits particular attention, as it tends to prove, that where one million of people may be maintained by paſturage, from nine to ten millions may be maintained by tillage, and without any additional extent of ground for working horſes, cattle, &c. if the land is cultivated by the ſpade.

Concluſion.

On the whole, though it may not be adviſeable to recommend the ploughing up of very rich old paſtures, or water-meadows, or land apt to be overflowed, yet, with theſe exceptions, there is every reaſon to believe, that other ſorts of graſs lands may be rendered much more productive, by being occaſionally converted into tillage; and, for that purpoſe, it is deſirable, that the converſion of ſuch lands ſhould be promoted as ſoon as poſſible,—by removing the obſtacles to ſuch converſion,—by enforcing the neceſſity of commuting tithes, without which no conſiderable tract of old paſture can be broken up,—by pointing out to landlords the conditions under which they may agree to ſuch a plan, not only without detriment to the real value of their property, but alſo yielding a moſt important addition to their income,—and above all, by explaining to Parliament, and to the public, that the meaſure above recommended, is one which may effectually tend to prevent future ſcarcities, and to render this country independent of foreign nations, in the important article of proviſion.

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* If cultivated in whole, or in part, with potatoes, the difference would be ſtill greater.

The Conductors are pleaſed with the opportunity of preſenting the public with any thing coming from ſo reſpectable a quarter, and will be glad to receive the obſervations of intelligent readers upon the important ſubject to which this paper refers.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Diſadvantages that attend want of Leaſes, and ſmall Capital.

GENTLEMEN,

I GIVE your correſpondent J. W. all credit for his wiſhes to improve the huſbandry of the weſt; it certainly needs it: but I am greatly miſtaken if his plan would contribute much to accompliſh this purpoſe. He ſeems to have miſtaken the cauſe of the diſeaſe; of courſe, he could ſcarcely be right in applying the remedy. When I read his letter and ſketch of a leaſe, I formed the deſign of troubling you with a few obſervations on both; but, as I perceive that another of your correſpondents promiſes ſome remarks upon the leaſe, I ſhall confine myſelf to the letter. Permit me, however, to obſerve, that every landlord, in granting a leaſe, ſhould be conſidered as making over all right to the management and produce of the property let, for a certain time, upon condition of receiving a ſtipulated compenſation, and the property at the end of that time uninjured. The leaſe, which reſts not upon this broad principle, muſt be injurious to one of the parties, perhaps to both.

Your correſpondent has ſpoken of the weſt country farmers not in the politeſt terms: "They move," he ſays, "and perform as they are impelled, like a machine or implement of huſbandry." This is rather too bad: might he not at leaſt have permitted them to be equal to their horſes? This mechanical motion of theirs he imputes to hard labour, ſtraitened circumſtances, and contracted prejudices. Had he aſcribed it to their ſtraitened circumſtances, as the great primary cauſe, and referred the other cauſes which he has mentioned to this, it had been both more liberal and juſt. Their poverty obliges them to work hard, and prevents them from enjoying thoſe means of improvement which would cure their prejudices. A poor man is often accuſed of obſtinate attachment to his own plans, becauſe he does not adopt others which he is unable to execute: this, I believe, muſt neceſſarily be the caſe with many weſt country farmers; but J. W. has ſpoken of them generally in a manner too ſevere for perſons more unfortunate than faulty: the remedy too

which he propoſes, if in any caſe proper, ought to be applied to the incorrigible alone. He waves the general queſtion, of reſtrictive covenants; but thinks that there can be no doubt of their neceſſity in the preſent caſe. He propoſes, very judiciouſly, that proprietors or their factors ſhould be well acquainted with farming; but, alas! what muſt become of the poor farmers if they are not? Without meaning the ſmalleſt diſreſpect to proprietors and factors, I may be allowed to ſay, that the generality of them cannot have that knowledge of agricultural affairs, which would make it adviſeable to put practical farmers under their management. Should Mr. W. be either a proprietor or factor, ſome may perhaps think that he will afford a proof of the aſſertion.

If, in any caſe, reſtrictive covenants and cultivation-tables are peculiarly improper, I ſhould think, in oppoſition to this gentleman, that it is where improvements are yet to be introduced. Every one knows, that a good ſyſtem of huſbandry cannot be eſtabliſhed without taking both ſoil and climate into account. It will be impoſſible to ſay how a ſingle farm, much leſs how an extenſive diſtrict, ought to be managed, till it be aſcertained, by experiment, what treatment, ſoil and climate taken together, it requires. How abſurd would be the attempt, then, to force a particular ſyſtem upon a diſtrict, before it can be known what ſyſtem is beſt calculated for it? Will Mr. W. inform me, whether, in a climate ſo moiſt as the weſt of Scotland, wheat can be raiſed as advantageouſly as ſome other grains? perhaps it may; but I preſume he is not certain. By not attending to the difference of circumſtances, the management of the beſt diſtricts might be introduced into the worſt, and nothing gained by the exchange. If reſtrictions, in the manner of cultivating the ſoil, are ever to be juſtified, it is only for the purpoſe of confining obſtinate or fooliſh men, where the beſt ſyſtem has been clearly eſtabliſhed; but, even to this there may be very weighty objections; and, therefore, I ſhould think the beſt cure is, to turn bad farmers about their buſineſs, for the wiſeſt regulations will not make them good.

How then ſhall we improve the huſbandry of the weſt? for improvement it certainly needs. The ſole cauſe of the preſent bad ſyſtem, is the want of capital in the hands of the farmers: remove the cauſe, and the effects will ceaſe. "Rotation of different crops, fallowing, ſummer working, making and uſing of compoſt, ſtraightening ridges, draining, irrigation, &c. weſt-country farmers count fooliſh and unprofitable:"

So ſays J. W. And what if I ſhould ſay they are not greatly miſtaken? except, perhaps, rotation of crops, uſing of compoſt, and ſtraightening of ridges, theſe operations would certainly be unprofitable to a perſon poſſeſſing 60 or 70 acres of land, and that not of the beſt quality. A man on ſuch a ſpot, and I believe the greater part of weſt country farms do not much exceed that quantity of arable land, cannot afford to make any expenſive improvements. If he get his land once ploughed, and the ſeed thrown into it any way, he muſt be content, and endeavour to do ſomething with his horſes through the reſt of the year, to keep himſelf and his family from ſtarving. No man, poſſeſſed of capital, would throw it away on a ſmall farm, where it could bring him no adequate return. He would not be fool enough to waſte his time and his money on a piece of ground, the fee-ſimple of which could not repay him.

> He that by the plough would thrive,
> Himſelf muſt either hold or drive,

as poor Richard ſays; and ſo muſt the generality of weſt country farmers ſay; but no man will either hold or drive, who has ſtock ſufficient to engage in any manufacturing or mercantile concern, where, with leſs labour, he can have a better return for his money. I do not ſay, that the farmers in the weſt know the beſt methods of cultivation, or, if they did, would be immediately diſpoſed to adopt them; but what I ſay, is, that, with all the knowledge in the world, and with the beſt inclinations, their poverty would render it phyſically impoſſible to make great improvements.

Endeavour, then, to throw capital into the hands of the farmers, or, in other words, get the land into the hands of thoſe who have capital: give them ſufficient employment for themſelves, without manual labour, and ſufficient recompence for their attention and money: diffuſe agricultural knowledge among them, their leiſure will allow them to attend to it, and their own intereſt will ſoon lead them to adopt what is profitable. It might be of great importance, to encourage, by advantageous leaſes, ſome men of capital and abilities, to come from well cultivated diſtricts: theſe, by their example, would demonſtrate the utility of improvements, and ſoon induce the generality to follow them. It might be beneficial likewiſe to a large tract of country, if one of Sir John Sinclair's experimental farms were eſtabliſhed ſomewhere about the centre of Ayrſhire: experiments may be conducted upon ſuch a plan, which it would be im-

prudent for an individual to hazard. But I repeat it again, that the poverty of the farmer muſt ever be an inſuperable bar to improvement; remove that, elſe you do nothing; and that can never be removed, but by making farms of ſuch a ſize, as to afford employment and compenſation to men of capital and abilities. Let proprietors and their factors endeavour to accompliſh this, and they will do infinitely more ſervice to the cauſe of agriculture than by manufacturing leaſes.

If theſe looſe hints are eſteemed worthy of a place in your magazine, I ſhall, perhaps, trouble you on ſome future occaſion, with an opinion upon that queſtion, Whether proprietors or factors ought to be conſidered as perſons moſt likely to diſcover uſeful improvements, and fit to direct practical men how to manage their farms. In the mean time,

I am, gentlemen, with beſt wiſhes for your ſucceſs,

Yours, AGRESTIS.

PREMIUMS offered by the BOARD of AGRICULTURE, for 1801.

No. I.—*Condition of the Poor.*

To the perſon who ſhall draw up and produce to the Board, the beſt, ſimpleſt, and moſt practicable plan for ameliorating the condition of the labouring poor of this kingdom, by alterations in the poor laws, of eaſy execution, and without materially increaſing poor-rates——*the Gold Medal.*

To be produced to the Board on or before the firſt Tueſday in March 1802.

No. II.—*Cottages.*

To the perſon who ſhall build on his eſtate the moſt cottages for labouring families, and aſſign to each a proper portion of land, for the ſupport of not leſs than a cow, a hog, and a ſufficient garden——*the Gold Medal.*

Accounts of the expences of building—land aſſigned—culture, if any—live ſtock, and ſtate of the families, with the rent paid—verified by certificates, to be produced to the Board on or before the third Tueſday in April 1802.

The ſame premium for 1803.

No. III.—*Cows for Cottagers.*

Doubts having been expreſſed by ſome perſons concerning the expediency of cottagers keeping cows, except on rich ſoils; the Board will give to the perſon who ſhall produce the moſt ſatisfactory account, verified by experiments, of the beſt means of ſupporting cows on poor land, in a method applicable to cottagers——*the Gold Medal.*

Accounts to be produced of the ſoil—articles cultivated—produce—ſtock kept—and every material circumſtance—verified by certificates, on or before the firſt Tueſday in May 1801.

The ſame premium for 1802.

No. IV.—*Culture of Plants.*

To the perſon who ſhall make the moſt ſatisfactory experiments tending to the improvement of the culture of each of the following plants reſpectively; viz. wheat, rye, barley, oats, peaſe, beans, tares, buck wheat, turnips, cabbages, roota baga, potatoes, carrots, parſnips, clover, lucerne, ſainfoine, chicory, hemp, flax, hops——*the Silver Medal.*

Accounts, verified by certificates, to be produced on or before the ſecond Tueſday in May 1802.

The ſame premium for 1803.

The ſame premium for 1804.

No. V.—*Cottage.*

To the perſon who ſhall build and deſcribe to the Board the cheapeſt cottage, being at the ſame time durable and comfortable——*the Gold Medal.*

A plan, elevation, and account of the materials and expence, verified by certificates, to be produced on or before the firſt Tueſday in May 1801.

The ſame premium for 1802.

No. VI.—*Shoes for the Poor.*

To the perſon who ſhall invent and execute, in a manner applicable to common uſe, the beſt and cheapeſt ſubſtitute for leather, in the ſhoes of the labouring poor, being an improvement on any that may at preſent be in uſe——*the Gold Medal.*

A pair of ſhoes, with an account of the materials and expence, to be produced on or before the firſt Tueſday in December 1801.

No. VII.—*Soiling Cattle.*

To the perſon who ſhall, through the entire ſummer of 1801, keep the greateſt number of cattle in ſtalls, houſes, or confined yards, and fed entirely in the ſoiling method with green food——*the Gold Medal.*

Certificates of the number of cattle, and acres of food, and ſorts eaten, the quantity of dung made, with other circumſtances of the experiment, to be produced on or before the firſt Tueſday in December 1801.

The ſame premium for 1802.

No. VIII.—*Waſte Land.*

To the perſon who ſhall improve, and bring to the annual value of not leſs than 10s. an acre, the greateſt number of acres heretofore waſte, not leſs than fifty——*the Gold Medal.*

Accounts of the improvement, verified by certificates, including the ſtate of the land before the experiment, and of the cultivation, expences, and produce, to be laid before the Board on or before the firſt Tueſday in March 1803.

Notice of the intended improvement to be ſent to the Board.

The ſame premium for 1804.

No. IX.—*Draining.*

To the perſon who ſhall lay before the Board the moſt ſatisfactory account of one of Mr. Elkington's drainages——*the Silver Medal.*

The ſoil and ſtate of the land before draining, the method and expence of the improvement, with a plan, and the reſult of the operation, to be produced on or before the ſecond Tueſday in December 1801.

No. X.—*Folding Sheep.*

To the perſon who ſhall, by a ſeries of the moſt ſatisfactory experiments, aſcertain the comparative advantages and diſadvantages, and beſt method of folding ſheep——*the Gold Medal.*

Accounts, verified by certificates, to be produced on or before the firſt Tueſday in April 1803.

The ſame premium for 1804.

No. XI.—*Irrigation.*

To the perſon who ſhall, in a country where irrigation is not generally in practice, water the greateſt number of acres, and in the compleateſt manner——*the Gold Medal.*

To the perſon who ſhall, under ſimilar circumſtances, water the next greateſt number of acres, and in the compleateſt manner——*the Silver Medal.*

Accounts of the old and new ſtate of the land and value, the method, expence, and produce, verified by certificates, to be laid before the Board on or before the third Tueſday in January 1802.

The ſame premium for 1803.

No. XII.—*Horſes and Oxen.*

To the perſon who ſhall make and report to the Board the moſt ſatisfactory experiments on the compariſon of horſes and oxen, in the general buſineſs of a farm——*the Gold Medal.*

The account, verified by certificates, to be produced on or before the laſt Tueſday in April 1803.

The ſame premium for 1804.

No. XIII.—*Green Crops for Manure.*

To the perſon who ſhall give the moſt ſatisfactory account, verified by experiments, of the effect of ploughing in green crops for manure——*the Gold Medal.*

Accounts, with certificates, to be produced on or before the firſt Tueſday in March 1802.

The ſame premium for 1803.

No. XIV.—*Potatoes and Wheat.*

Potatoes and wheat, in conſtant ſucceſſion, being the courſe of crops which affords the moſt abundant food for man, the Board will give to the perſon who ſhall make and report the moſt ſatisfactory experiments, on not leſs than five acres cultivated in that courſe during four years——*the Gold Medal.*

Accounts of the ſoil, culture, produce, application or price, verified by certificates, to be produced on or before the firſt Tueſday in May 1804.

The ſame premium will be given (but not to the ſame perſon) for the ſame account of ſix years.

Accounts to be produced in May 1806.

The ſame premium continued—Accounts to be produced in 1807.

No. XV.—*Manures.*

To the perſon who ſhall lay before the Board the moſt ſa-
factory account, verified by chemical experiments, or other
fficient authorities, of the nature of manures, and the prin-
ples of vegetation——*the Gold Medal.*

To be produced on or before the firſt Tueſday in De-
cember 1801.

No. XVI.—*Manures.*

To the perſon who ſhall lay before the Board the moſt ſa-
factory account of the application and effect of manures,
rified by practical experiments on not leſs than one acre
r each ſort of manure——*the Gold Medal.*

To be produced on or before the firſt Tueſday in De-
cember 1802.

The ſame premium for 1803.

No. XVII.—*The Weather.*

To the perſon who ſhall lay before the Board the moſt ſa-
factory paper on the means of aſcertaining the probable
ite of the weather, ſo as to furniſh uſeful information to
e huſbandman——*the Silver Medal.*

To be produced on or before the third Tueſday in May
1801.

The ſame premium for 1802.

No. XVIII.—*Inſtruments.*

To the perſon who ſhall give the beſt account, with draw-
gs, of the various inſtruments of huſbandry——*the Gold*
edal.

To be produced on or before the firſt Tueſday in No-
vember 1801.

The ſame premium for 1802.

No. XIX.—*Land for Cottagers.*

The Board having received information that the labouring
or on the eſtates of ſeveral perſons in Rutland and Lin-
lnſhire, having land for one or two cows, and a ſufficiency
potatoes, have not applied, in the preſent ſcarcity, for
y parochial relief; and it appearing to be a great national
ect to ſpread ſo beneficial a ſyſtem, the Board will give

to the perſon who ſhall explain, in the moſt ſatisfactory manner, the beſt means of rendering this practice as general through the kingdom as circumſtances will admit——*the Gold Medal.*

To be ſent to the Board on or before the firſt Tueſday in November 1801.

No. XX.—*Cottage.*

To the perſon who ſhall produce to the Board the model of the beſt and cheapeſt cottage, on a ſcale of one inch to a foot, with eſtimates of the expence of erecting it——*the Silver Medal.*

To be produced to the Board on or before the firſt Tueſday in December 1801.

No. XXI.—*Oven.*

To the perſon who ſhall produce to the Board, the beſt cottage oven, to bake, at one heating, bread ſufficient for a family of ſix, for a week.——*the Silver Medal.*

Cheapneſs of the oven and fuel, eſſential points of merit.

To be produced to the Board on or before the firſt Tueſday in December 1801.

No. XXII.—*Cottage Bed.*

To the perſon who ſhall produce to the Board the beſt and cheapeſt bed and bedding for a cottage, being an improvement on any already known——*the Silver Medal.*

To be produced to the Board on or before the firſt Tueſday in December 1801.

No. XXIII.—*Experiments.*

To the perſon who ſhall produce to the Board an account of the moſt important experiment or experiments in agriculture, made during the year 1801 or 1802——*the Gold Medal.*

Accounts to be produced, verified by certificates, on or before the firſt Tueſday in March 1801.

No. XXIV.—*Plough.*

To the perſon who ſhall produce to the Board the plough which ſhall, with the leaſt force, turn a furrow not leſs than ſix inches deep, and nine broad, in the beſt and neateſt manner——*the Gold Medal.*

To be produced on or before the firſt Tueſday in February 1801.

The plough which gains the premium to remain the property of the Board, the price of it being paid.

No. XXV.—*Carts.*

To the perſon who ſhall produce to the Board the Cart, or other carriage applicable to common uſe, in which one horſe ſhall draw the greateſt weight——*the Gold Medal.*

To be produced on or before the firſt Tueſday in February 1802.

The cart which gains the premium to remain the property of the Board, the price being paid.

No. XXVI.—*Laying down to Graſs.*

To the perſon who ſhall, in the moſt ſatisfactory manner, make the following experiment in laying down land to graſs, on a ſcale of not leſs than three acres to each diviſion, and report the reſult to the Board——*the Gold Medal.*

The land to be divided into three parts, one ſown with graſs ſeeds among barley or oats, in the ſpring, on land that was fallowed, or yielded turnips the preceding year: one ſown with graſs ſeeds alone in July or Auguſt, having been fallowed from the Michaelmas preceding: and the third ſown with graſs ſeeds and wheat early in September, having been fallowed or cropped with tares or turnips: the ſoil to be of the ſame quality; the graſs ſeeds the ſame in each diviſion. The graſs to be fed with the ſheep the firſt year. Accounts, ſtating the comparative expences and ſucceſs of the three methods, verified by certificates, to be produced to the Board on or before the firſt Tueſday in December 1803.

No. XXVII.—*Seed Wheat.*

To the perſon who ſhall, by the moſt ſatisfactory comparative experiments, aſcertain the proper quantity of ſeed-wheat to be uſed per acre, in the common or broad-caſt huſbandry; not leſs than one acre to be applied to each quantity of ſeed——*the Gold Medal.*

Accounts, containing a particular deſcription of the ſoil,

and the preparation thereof, including the manuring, if any; alſo the time of ſowing; the various quantities of ſeed employed; with the reſpective products, verified by certificates, to be produced to the Board on or before the firſt Tueſday in December 1802.

No. XXVIII.—*Seed Wheat.*

The ſame premium as in the preceding number, and on the ſame conditions, to be given for aſcertaining the proper quantity of ſeed wheat dibbled on a clover or other lay.

No. XXIX.—*Seed Barley.*

To the perſon who ſhall, by the moſt ſatisfactory comparative experiment, aſcertain the proper quantity of ſeed barley to be uſed per acre, in the common or broad-caſt huſbandry; not leſs than one acre to be applied to each quantity of ſeed——*the Gold Medal.*

Accounts, containing a particular deſcription of the ſoil, and the preparation thereof, including the manuring, if any; alſo the time of ſowing; the various quantities of ſeed employed; with the reſpective products, verified by certificates, to be produced to the Board on or before the firſt Tueſday in December 1801.

No. XXX.—*Seed Oats.*

The ſame premium, and on the ſame condition, to be given for aſcertaining the proper quantity of ſeed oats.

No. XXXI.—*Seed Oats.*

The ſame premium, and on the ſame conditions as in the preceding number, to be given for aſcertaining the proper quantity of ſeed oats dibbled on a lay, or on old paſture ground.

GENERAL CONDITIONS.

I. The Board reſerves to itſelf the power of withholding any premium, when the communication or communications are not deemed ſufficiently important to merit the reward.

II. The MS. &c. ſent in claim of premiums, to remain the property of the Board.

III. All memoirs, &c. ſent in claim of premiums, to be without names, but with a mark or number; and accompanied by a ſealed letter, (on which is to be written the ſame mark or number), containing the name and addreſs of the claimant; which ſealed letter will not be opened unleſs the premium is adjudged to that mark or number.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

In your Magazine, No. 4. page 386, a Perthſhire farmer recommends planting in ſpring old *roots of cabbages* and *open kail* that had been cut, after taking off all the young ſhoots but one. I have made a trial of this method, and find all the cabbages and kail ſo planted run to ſeed. I wiſh to know if any of your other readers have tried it, and with what ſucceſs: For I am much inclined to think I ought to have predicted ſuch a conſequence. A. S.

Edinburgh, 6th April 1801.

FOR THE FARMER'S MAGAZINE.

LETTER V.

Strictures on Farm-Management near London.

(Continued from p. 126.)

Auguſt 1799.

In the foregoing obſervations, I have endeavoured to ſketch out a regular plan of fallow, by which land ſuch as yours will be rendered highly productive to its occupier, and to the community.

I ſhall now advert to ſeveral points of practice, in which I conſider your neighbourhood as being highly reprehenſible.

Perhaps my obſervations, on theſe miſcellaneous ſubjects, may run into length. I have not preſented to myſelf any ſtrict plan of writing, but mean only to take the ſubjects as they riſe in my mind, or as preſented to me by the notes I took when viewing your eſtate. My intention is, to give my ideas on the means of improving land ſuch as yours, not to write a regular ſyſtem of huſbandry: that would require more leiſure and more information than I am poſſeſſed of.

Although your land would certainly be rendered much more productive than at preſent, by means of a clean fallow, conducted on the plan I have endeavoured to point out; yet it would not, by that means only, be brought to its utmoſt poſſible ſtate of productiveneſs, which ſhould ever be the object of every judicious huſbandman having a ſecure holding, ſo long as the portion is kept continually under tillage, and the reſt invariably in hay, meadow, and perpetual paſture. The alternate huſbandry, by which the ſoil is prepared for carrying large crops of cultivated herbage, by means of perfectly well-conducted fallow, and clean crops of grain and pulſe, and by which the ſoil is ameliorated for bearing large and profitable crops of marketable grain, by means of paſturage; that is the huſbandry attended with the greateſt profit; and ſuch is the ſyſtem of huſbandry which ſhould always be followed, except in very peculiar ſituations, and under very particular circumſtances.

I know that the *tythe* is reckoned an obſtacle to agricultural improvements, and an inducement to keep as much land as poſſible continually in graſs. But, as your eſtate is about to get clear from that impediment, I have formed theſe obſervations as if it did not exiſt.

The plan of management, or ſyſtem of huſbandry, which I mean to propoſe, is likewiſe the way in which moſt is contributed to the public ſtock, of bread and butter, beef, mutton, &c. The patriotiſm, therefore, of the ſkilful and induſtrious huſbandman, when thus unfettered, is of the moſt glorious and uſeful nature, as it equally ſerves the intereſt of the commonwealth and the patriot; while at the ſame time it remains perfectly free from cruelty, rapacity, and corruption.

I obſerved on your eſtate very particularly, and ſaw with regret the ſame ſlovenly management to prevail through a great part of my journey, that a full ridge-breadth, from fifteen to twenty feet of land, is uniformly loſt to every purpoſe of huſbandry, at the head and foot of every field, on which the

plough is turned; and that, almoſt generally as much land is loſt on each ſide of every field, beſide the hedges. Theſe neglected portions are never ploughed or manured, and are, in many caſes, interſperſed with a variety of uſeleſs ſtinted ſhrubs and buſhes of different kinds. This ſcandalous waſte of land, and ſhameful mark of ſloth and negligence, ſhould inſtantly be done away. All theſe wretched buſhes ſhould immediately be grubbed up; they encumber the ground uſeleſsly, prevent the operation of the plough, and conſequently diminiſh the general productiveneſs of the land, and occaſion a very great waſte of wool, by tearing it from the backs of the ſheep.

Without pretending to have made any thing like an accurate calculation on this ſubject, I conjecture that, on the average, not leſs than a ſixth part of the arable land is thus left unproductive. This loſs, at the preſent high price of wheat, amounts to no leſs than thirty ſhillings for every acre in the field, calculating on the wheat produce as given me by your foreman. Under a more perfect ſyſtem of cultivation, the loſs on this ſingle article of negligence, would amount, at the preſent price, to forty, fifty, or even ſixty ſhillings an acre. Were the loſs only a fourth part of what I have here aſſumed it to be, it is certainly an object of ſufficient moment to call for inſtant correction. If a field is worth cultivation at all, no part of it ought, on any account, to be thus ſhamefully left waſte.

I can readily diſcover the origin of this evil in the hedge-row timber, which encumbers the fields in many parts of England. This I would gradually do away, where it exiſts, by grubbing up all ſuch noxious timber, on land that is capable of profitable cultivation; and guard againſt its return in future, by diſtributing timber and coppice in diſtinct plantations, on the worſt ſoil of the ſeveral eſtates, and in ſuch broken grounds and ſtrips as might be difficult and expenſive to bring under proper cultivation.

In all arable lands, the hedges ought, as much as poſſible, to be in ſtraight lines, trained up by the pruning-knife into living walls, of five or ſix feet high, about two feet and a half thick at the bottom, and dreſſed off at the top into a round or edged ridge.

If hedge-row timber is perſiſted in, it ought to be dreſſed up into tall ſtandards, with ſmall heads, ſo as not to overſhadow and ſpoil the crops of corn and graſs below. The kinds of trees, planted in hedge-rows, ſhould always be thoſe

which form dipping-top roots, never thoſe which ſpread their roots wide immediately below the ſurface, which invariably rob the growing crop, for a good way round, of the nouriſhment they would otherwiſe derive from the ſoil. Coppice-wood, or ſhort buſhy pollards, ought never to be permitted in hedge-rows, eſpecially in ſmall fields; as, beſides the evil derived from their roots to the growing corn and graſs, they prevent the circulation of air, ſo neceſſary for drying ſucculent herbage into hay, and for winning, as we term it, the corn crops. Beſides, hedge-row timber or coppice deſtroys the hedges, when it comes to be cut down, by producing incurable and unſightly gaps.

R. r. r. r.

LETTER VI.

Strictures on Farm-Management near London.

Auguſt 1799.

I WAS ſtrongly led to condemn the ſyſtem of dry meadow, or perpetual hay-field management, in lands that are adapted for cultivated crops. By keeping theſe fields continually in hay, they become exceſſively foul. Every weed which finds the ſoil congenial to its nature, continually improves in vigour, and is conſtantly puſhing forwards its roots, or diſperſing its ſeeds all around, to occupy the ſoil. While, at the ſame time, ſuch herbage as a diſcriminating and judicious farmer would chooſe to cultivate, from its ſuperior nutritious quality, early growth, and abundant produce, is gradually choaked up, and periſhes, leaving the field at length almoſt excluſively occupied by an endleſs variety of weeds, many of them altogether uſeleſs to man or the animals which he breeds for profit, and many of them highly pernicious in their qualities.

Inſtead of this ſlovenly plan, I would ſtrongly inculcate the advantages to be derived from cultivated herbage, on land previouſly rendered clean from weeds, by the fallow-proceſs properly conducted, and left in vigour, by not having been over-cropped, and by having been thoroughly manured during the preceding rotation of arable crops.

Among theſe ſuperior herbages, I reckon rye-graſs and red clover as firſt in rank; eſpecially where the land is only

to remain one year, or at moſt two years, in graſs. Where a longer time is required, white clover, trefoil, or yellow clover, and rib-graſs or narrow-leaved plantain, ought to be mixed in proper proportions. On ſoils adapted for their cultivation, ſain, and ſoin or cinquefoil, and lucerne, may be cultivated to advantage; but of theſe I do not pretend to have any practical knowledge.

I will engage that, by a judicious management of cultivated herbage, the produce of the land will be increaſed a full half more, both in hay and paſturage, than is to be derived from the general run of perpetual meadow; beſides, the enormous increaſe of corn produce, which, with the moſt perfect certainty, is to be procured from the alternating ſyſtem of huſbandry, to be afterwards detailed.

I know that, in certain ſoils, but they are very rare, great crops of meadow-hay are reaped almoſt every year, which give greater profit to the occupier than can be derived from almoſt any ſyſtem of cultivation. Your land, however, is not of that deſcription, as I have formerly pointed out, by an inſtance of earlier and ſuperior produce from a ſlip of newly cultivated herbage in your beſt hay-meadow.

Where irrigation can be practiſed without any very great coſt, the ſyſtem of conſtant hay-meadow may perhaps be more profitable than aration. In the neighbourhood of large towns, where milk is in great demand, and ſells high, continual hay-meadow and paſture may likewiſe be extremely profitable. Yet I am very ſtrongly inclined to believe that, even within a few miles of London, laying the tythe aſide, which I do not profeſs to underſtand, the land would be greatly more productive under the alternate ſyſtem, bringing in the cultivated graſs crop as frequently as poſſible.

I do not pretend to be a good judge of *ſheep*, or of their management; but the ſheep I ſaw on your land, and, generally ſpeaking, for many miles north from London, ſeem to me a very bad kind. They are all horned, which is dangerous to the ewes in lambing. They are very leggy, and have ſmall fore-quarters, both of which are bad qualities to the butcher. So far as I could judge, their fleeces appeared very light.

In their management, too, I have ſeveral circumſtances to find fault with. You are far too long in ſhearing them. When I was on your eſtate, they were ſtill labouring under their wool in the beginning of July: Whereas, in your climate, and in your well-ſheltered fields, they might have diſ-

penſed with the burden a month or ſix weeks earlier. Beſides keeping the ſheep too warm, a great deal of the wool is ſcratched off and loſt, by keeping on the fleeces ſo long.

I have already thoroughly reprobated your folding plan. If that is ſtill to be perſiſted in, I would ſtrenuouſly adviſe, that they ſhould have food, while in the folds, upon the fallow-grounds. This is practiſed in ſeveral parts of England. Hay is regularly given them in proper racks. Some ſuperior managers even ſupply them regularly with water, in long narrow troughs, led by means of a water-cart, while in the fold on dry hay.

The Diſhley, Bakewell, or new Leiceſter breed of ſheep, is, I believe, generally ſpeaking, the moſt profitable to the huſbandman of any in the iſland; eſpecially on rich productive ſoils. But they, or any other, ſhould never be half ſtarved, pent up in cloſe folds, to muck the land; and to eat, or rather to famiſh on, the ſo called fallows. Sheep, and every kind of fatting ſtock, ſhould always have as much food as they can lay their teeth to. Thus they fatten early, and give uniformly the higheſt profit for their keep. The ewes, thus treated, fatten off their lambs ſoon, at a ſeaſon when lamb ſells at a high price; and are themſelves much ſooner afterwards ready for the butcher; and thus they much ſooner make way for a new flock, to run the ſame round of profit. Beſides, it is an eſtabliſhed fact in huſbandry, that the dung of animals high in condition, is of a much more fertilizing quality, than that of ſuch as are pinched in their food, and in low order.

Within the moderate diſtance from London at which you are ſituated, perhaps it might be an object to breed early lambs, from the Dorſetſhire ſheep: But, as I pretend to no accurate knowledge of this ſubject, I merely mention it here as a hint which may deſerve being inquired into.

R. r. r. r.

TO THE EDITORS OF THE FARMER'S MAGAZINE.

Making of Compoſts on Head Lands.

GENTLEMEN,—One of your conſtant readers begs to obtain from you, or your correſpondents, through the channel of your Magazine, the beſt directions that may occur as to the pre-

per mode of *forming a compoſt midden out of a head-land*, which is a mean of procuring, without expence, materials for compoſt, that muſt frequently preſent itſelf to farmers, who have lands under conſtant tillage.

The Queriſt has a field, ſown with oats, which he intends to crop with turnips next ſeaſon. The head-land upon which the plough turns, at the lower extremity of the field, (which lies on a declivity) has had an accumulation of ſoil, from plough-carriage and rain-waſhing, ſo as to allow of the removal of perhaps a ſpading of earth all along, without danger of reducing it to an inferiority to the generality of the field.

To ſave expence of carriage in removal of this ſpade-depth of earth of ſaid head-land, he propoſes to cultivate it into compoſt by the plough, as it lies, and to apply it next ſeaſon to the turnip-crop upon the field; which will make one carriage ſerve for all.

Theſe preliminary parts of the proceſs are with him indiſpenſible; and, in regard to other farmers taking advantage of the ſame opportunity, he conceives that, if not indiſpenſible, they will at leaſt be often found extremely convenient in point of ſaving of both expence and time.

What he wiſhes, then, is to have directions how to form, in the beſt manner, the ſurface-ſoil of this head-land into compoſt, by means of *mere plough-labour*.

The ſoil of the field and its head-land, though more tenacious than ſand, and inclined a little to clay, is not at all of that ſtiff ſort adapted to beans or wheat, but abundantly free, ſo as to be well adapted to turnip-culture.

He propoſes to plough his head-land repeatedly through ſummer; to clean and pulverize the ſoil, and alſo to lime it very heavily. In regard to the application of dung along with the lime, he has been puzzled by varieties of opinion, (whether founded on mere theory or juſtified by practice, he cannot pretend to ſay) ſome alleging that *hot lime* might diſſolve, or rather *annihilate* the dung, ſo that the midden would receive no benefit: ſome, that lime, either hot or cold, would have this effect; others, that the diſſolution of the dung by the lime would redound to the benefit of the compoſt.

Any directions, *juſtified by practice*, as to forming the midden, whether with lime alone, or dung alone, or with both together:—As alſo, as to the mode of laying up the ſoil through winter, *by the plough alone*, if practicable, or at leaſt

with as little of ſpade-labour as poſſible:—will much oblige your conſtant reader *. *M.*

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On Tithes, and Oxen for Draught.

GENTLEMEN,

I CONGRATULATE you on the completion of your firſt volume, and the hitherto promiſing ſucceſs of your plan and execution: may the ſucceeding ones equal, or ſurpaſs the firſt. I am ſorry my leiſure, of late, has not been ſuch as to permit me to give that aſſiſtance which, to have been able to do to any purpoſe, be aſſured, would have been my pleaſure and pride; and it gives me real ſatisfaction to obſerve your pages filled with the ſupplies of abler correſpondents. Yet permit me to obſerve, on the letters on Tithes, and Oxen for draught, in No. IV. that the writers appear to me to have got the "*wrong ſow by the ear*," on both ſubjects, though that on tithes was ſatisfactorily replied to by a correſpondent in No. V.

To any one who has been long accuſtomed to the drudgery of obtaining incloſure-bills in South Britain, it is perfectly aſtoniſhing to hear the aſſertion, "that the incloſure and cultivation of waſtes is not diſcouraged by the tithe ſyſtem," when it is well known that the hatred and averſion of cultivators to this ſyſtem is ſuch, that they, on almoſt every incloſure, inſiſt on a commutation of tithes as a preliminary ſtep, a *ſine qua non*; that the tithe-owner, improving on this known principle, ſcarcely knows what proportion, or what terms of commutation he would be contented with; and that the commoner, who, if rouſed by other wants and circumſtances to be in earneſt for incloſing, yet views with reluctance the quantity of land he muſt loſe for ever, perhaps to be ſettled in *mortmain*; that land, or portion of the ſoil which is *real* property, too, to be exchanged and alienat-

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* In forming a compoſt of that kind, the dung, in the ordinary way of management, is in a great meaſure loſt, and will certainly be uſed to much greater advantage by itſelf: When lime alone is uſed, the compoſt may be very completely made by the plough, taking care not to lay the whole lime on it once, but at different times, ploughing and harrowing well after each liming.

ed for ever, as a compenſation for the tithes,—is it to be marvelled at, that this ſyſtem, with its undefined and unlimited claims, ſhould prove a real bar and obſtacle to incloſures? Reaſoning apart, we know it to be ſo, and in many inſtances *inſuperable*.

While ſuch depriving ſyſtems are perſevered in, in the teeth of experience; and while we are too frequently meeting with doubters on the ſubject, even among thoſe who ought to know better, as well as determined ſupporters among thoſe intereſted in ſuch ſyſtems, no wonder that famine ſtalks abroad, ſcourging the country. Allow me alſo to ſay, this writer is rather ſarcaſtic on the practice of Engliſh huſbandry. He may be aſſured, that 5 horſes, &c. to a plough, and 5 tons per acre turnips, are as much exploded here as in his own neighbourhood; and that, in the real agricultural and turnip diſtricts of South Britain, 50 tons per acre would not be marvelled at, even without *drilling*; for this writer ought to know, that very good crops of turnip may be raiſed in the *broadcaſt method*, when well hoed, though the *drilling* of them is by no means a *new* practice here.

A word now on the compariſon of oxen with horſes for draught. To a South Briton, who has been at all times accuſtomed to working oxen, who has uſually worked good ſtout beaſts, weighing, when fattened, 70 or 80 ſtones of 14 lb. in ſingle yokes or cottars, along with his horſes; who has repeatedly ſent them out, 2 horſes and 2 oxen in his waggon loaded with corn, as for 4 horſes, and alſo with back-carriage of 2½ tons of coals, from 12 to 15 miles, and back, in the day, a journey of courſe amounting to from 24 to 30 miles, beſides the long delays; and has regularly ſeen his team ſo mixed, return as early as when horſes alone were ſent; I ſay, to a perſon ſo circumſtanced, it ſeems ſurpriſing to hear 6 *oxen* ſet againſt 2 *horſes*, by way of compariſon of their reſpective merits; he conſequently gives up all further examination of the ſubſequent reaſoning and calculation, when he finds the data ſo enormouſly wide of the truth.

It is no uncommon thing to ſee, in this part of the iſland, a pair of oxen, *without a driver*, as tractable at the plough as horſes, and performing nearly, if not quite as much work as a pair of heavy cart-horſes. The natural concluſion for us therefore is, that the oxen your correſpondent aſſumes, are of the *ſmall black kind*, ſuch as we ſee travelling on our

road ſouthwards for a market, and which are ſo diminutive in ſize, as well to warrant the compariſon above mentioned *.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On the Exaction of Tithe in Kind.

GENTLEMEN,

As I believe nine-tenths of your readers are ſatisfied that the exaction of tithe in kind operates materially in impeding agricultural improvement, it is unneceſſary for me to trouble you at any length, in anſwer to the remarks of a *Scots farmer*, p. 152. I am induced, however, to notice what he ſtates, concerning the extra expence incurred, in converting what he calls the *old fogged paſtures of England* into corn fields, which he conſiders to be ſo trifling, that the whole of it may be defrayed out of the firſt year's crop. In my humble opinion, the expence of ſuch a converſion would be conſiderable, perhaps not under 15l. per acre, were the ſeveral operations executed in a ſuitable manner. Suppoſe, for inſtance, that a crop of oats is taken the firſt year, ſo far no extra expence is incurred, unleſs draining is required; but during the ſecond year, when a complete ſummer-fallow, and dreſſing of hot lime, will be indiſpenſibly neceſſary to quicken and ſtimulate

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* The Conductors find themſelves under the neceſſity of diſſenting, in the moſt decided manner, from the opinion of the author of this communication, in regard to the comparative uſefulneſs of horſes and oxen, for the purpoſes of draught or burden, an opinion in which they are ſupported, by the practice of almoſt every improved diſtrict in Britain; in the greateſt part of which it will be found, that in proportion as improvements have advanced, oxen have fallen into diſuſe; and though in a few ſituations where the ſyſtem of agriculture has made conſiderable advances towards perfection, a ſtrong predelection is ſtill entertained for oxen; we are diſpoſed to think, that, even in theſe ſituations, if a fair debtor and creditor ſtatement were made out, the compariſon would be greatly in favour of horſes.

In one point we agree with our correſpondent, and are of opinion, that the great increaſe in the number of horſes for draught, burden, poſting, pleaſure, and other purpoſes, the quantity of grain required for their ſupport, which exceeds in a very uncommon degree the proportion formerly aſſigned to our domeſtic animals, has occaſioned a conſumption that has not only put an end to the export trade, but rendered exportation to a great extent neceſſary: We think it highly proper to ſtate this fact, as it leads to a meaſure eſſentially neceſſary to the ſalvation of the country, that is, the bringing of an additional number of acres under the plough.

ſuch old fogged lands; the outlay, when added to the rent and labour, will not be leſs than I have ſtated. Your correſpondent may here tell me, that this is not the manner in which the graſs lands of England are managed, when converted to tillage.—So ſay I,—but what is the cauſe which prevents it from being practiſed? Moſt undoubtedly no other than that the profits are ſeized upon by a third perſon, who neither limes nor fallows. I have no objection that ſuch ſhould draw a part of the rent, but induſtry ought never to be taxed. Our Scots teind laws are founded upon this principle, and I ſuppoſe the *Scots farmer* will join me in beſtowing that praiſe upon our northern legiſlators which their wiſdom and prudence eminently claims.

With regard to the queſtion repeated, "Whether tithe-"free lands are generally better cultivated than thoſe liable in "tithe?" I formerly ſtated in ſubſtance, that a commutation undoubtedly ſecured the farmer in the full poſſeſſion of the profits of every improvement he might make, which I conſidered as a ſtrong incitement in favour of ſuperior management. I may now add, what I conſider to be a deciſive argument, viz. that where tithes are taken in kind, the tenth part of the dung is annually abſtracted from the premiſes, or, in other words, that once in ten years, the farm is robbed of every particle of manure. I am fully ſenſible that your correſpondent knows ſo well how to appreciate the value of dung, that I muſt believe he overlooked this objection, when he made it a queſtion, Whether titheable lands, or thoſe tithe-free, were generally beſt cultivated, i. e. improved?—I am,

Yours, &c.

N. B.

FOR THE FARMER'S MAGAZINE.

Sketch of a Tour through the Northern Counties of Scotland.

PART III.

ABERDEENSHIRE is an extenſive diſtrict, and forms the north-eaſt corner of the iſland. The general diviſions of the county are *Mar*, *Formartin*, *Buchan*, and the *Garioch*. *Mar* comprehends that part of the county, which lies between the

rivers Dee and Don, and is upon the whole very barren and mountainous. *Formartin* extends from the Don to the Ythan, and is bounded, on the weſt, by a ridge of hills near Old Meldrum: on the ſouth it is interſected with moſſy bogs; but northward, the ſoil is of a clayey nature, and capable of much improvement. *Buchan* includes the land from the Ythan to the Doveran; and, with a few exceptions, may be wholly cultivated. *Garioch* lies in the inland part of the county, and conſiſts of an extenſive vale, generally 8 or 10 miles in breadth; moſt of which is good arable land, well calculated for every modern improvement.

In no part of Britain have greater improvements been made upon the ſoil, than in the vicinity of Aberdeen; and, what to ſome may appear ſurpriſing, theſe have been chiefly executed by perſons not trained up to agriculture, but whoſe early life was devoted to the purpoſes of trade and manufactures. Theſe cultivators may be juſtly ranked as friends to the human race; they have given funds for the ſubſiſtence of mankind, from whence none were derived in former times, and increaſed the national ſtock in its moſt permanent branch. In fact, no agricultural enterpriſe appears too hard for an Aberdonian. Rocks have been blown, large ſtones dug up and carried off, the ſoil trenched, and lime and dung applied, where the hand of ſterility formerly ruled, and where nothing was to be ſeen but barrenneſs and poverty. It is with pleaſure we notice, that the reward has been in proportion to the merit of theſe extraordinary exertions, and that rents from 3l. to 4l. per acre are now produced, where ſcarcely 1s. was paid prior to theſe improvements. In the hands of the men of Aberdeen, the waſte lands of England would be a fund from whence more wealth could be drawn, than from the mines of Mexico and Peru united; yet John Bull ſtaggers, when the cultivation of theſe waſtes is mentioned, and pleads eſtabliſhed uſage, as an excuſe for leaving them in their preſent unproductive ſtate. The conduct of ſuch cultivators is ſo praiſe-worthy, that we could dwell on it much longer, did the limits of this communication admit of it.

Leaving *Aberdeen*, we paſſed through the heart of the county by *Old Meldrum*, a route we would not recommend to future travellers. Before croſſing the river Don, the land is highly cultivated, carrying excellent crops of turnips, potatoes, beer, clover, &c.; and we learned, that the huſbandry of Flanders is here ſucceſsfully imitated, kail being

generally planted immediately after the potatoe crop is taken up, and turnips often ſown after the bear crop is reaped. Paſſing the bridge of Don, the country altered much for the worſe; the roads were rough; cultivation was only partially carried forward; the crops were inferior, and population appeared very limited. Adjoining Old Meldrum, there are ſome good fields; one of them carrying wheat, the firſt of that grain we had ſeen ſince leaving Aberdeen, though the ſtage is 18 miles.

From *Old Meldrum* to *Turreff*, 17 miles. Along the road we ſaw ſeveral fine fields of barley, oats, graſs, and turnips, particularly at the *Chapel of Segget*. Few potatoes were diſcernible, though their utility, as an article of food, is now extenſively recogniſed. The general run of the ſoil of this tract, being dry and heathy, renders it very eligible for what is called the ſtock-huſbandry; though at preſent only black cattle are kept. We ſaw ſeveral extenſive farms; but little of the land was incloſed. The prevailing objects ſeemed to be the growth of corn upon the beſt land, and paſturing cattle upon the inferior ſoils; in theſe reſpects, we conſider the general ſyſtem of Aberdeenſhire to be exceedingly defective. Saw two pair of fine working bullocks near the Chapel of Segget.

To *Banff* 10 miles. Some good fields of barley, oats, and graſs, to the weſtward of Turreff; and the country, northward, appeared to be in a thriving ſtate, where any tolerable attention was paid to cultivation. At *King Edward*, we noticed fine oats; indeed the general run of crops had no medium, either very good, or very bad. Met, on the road to Banff, a great number of carts, with lime-ſhells, imported from Sunderland and the Frith of Forth; which, from every account given us, produced infinite benefit upon the ſoil of this diſtrict. It is only a ſlight liming, after all, that is given, perhaps not exceeding twenty barley bolls per acre; but the advantage is obvious. The carts are generally drawn by one horſe, and lightly laden, the roads being bad and unequal. In no inſtance is the police of Aberdeenſhire ſo defective as in road-making; for there is not a turnpike within the bounds of the county (at leaſt we have heard of none) and the public are ſo well acquainted with the management of what is called the *ſtatute-labour*, that no ſurpriſe will be excited, when they learn the uncomfortable ſtate of the roads in this diſtrict. It gave us pleaſure, however, to hear, that a new line is about to be marked out;

and as moſt of the roads recently made in Britain are conſtructed and executed upon more ſcientific principles than were adopted at the introduction of the turnpike ſyſtem, we truſt, that, at a future period, this county will be as much ſuperior to others in that reſpect, as it is at preſent behind every county in the lowlands of Scotland.

One trait of Aberdeenſhire huſbandry muſt be noticed, before going farther, which is, that all the turnips we ſaw were ſown in the broadcaſt manner; a mode of cultivating this root, not practiſed, we believe, in any other part of Scotland. Much attention ſeemed, however, to be paid to them, as the land was ſufficiently cleaned; indeed, the farm-ſervants appeared to have no other work to perform; for very little naked fallow was to be ſeen. What appeared ſurpriſing to us, we did not perceive a ſingle female employed in field-labour, which is all executed by men; contrary to the practice of the ſouthern counties, where work of that kind is performed by girls and boys, while the men work the horſes, all the ſummer months.

Another thing that deſerves notice is, that *beer* or *bigg* is univerſally ſown in this county, inſtead of barley, which is cuſtomarily ſown in almoſt every other lowland diſtrict, being found more valuable and generally more prolific. The crop of beer, however, ſeemed excellent, and, as every diſtrict has its particular climate, we refrain from condemning the cuſtom of ſowing this variety, hoping that its ſuperior utility is ſanctioned by experience.

Very few ſheep are kept in Aberdeenſhire, and theſe are much neglected; nor can this animal be kept with profit, till the general ſize of farms is increaſed, and the flocks put under the care of ſkilful ſhepherds. The rearing of cattle ſeems to be an object which meets with more attention from the farmer, though a conſiderable part of the ground is naturally more applicable to the ſheep huſbandry. A great outcry has prevailed, that ſheep have depopulated Scotland; but this county affords a pregnant proof, that the popular idea is altogether unfounded. Perhaps the number of ſheep here is leſs than were kept a century ago; whereas, if Aberdeen and other towns are deducted, the population of the county has conſiderably decreaſed, a circumſtance that cannot be placed to the account of large farms; for nine-tenths of the land are poſſeſſed by ſmall farmers. In fact, the ſize of farms has been materially leſſened ſince the beginning of the 18th century; yet, none of the conſequences have been pro-

uced by the reduction, which, according to the warm, but miſtaken principles of rural political declaimers, ought naturally to have followed. The radical defect of huſbandry in his diſtrict proceeds from the want of capital among the tenantry; and, till this defect be remedied, Aberdeenſhire will not make that figure in the agricultural annals of Great Britain, which, in other reſpects, it is ſo well calculated to maintain.

The approach to *Banff* is beautiful in the extreme. The Moray Frith in front, a fine cultivated country on each hand, and the thriving policy around Lord Fife's houſe, all ſtarting into view at once, lend each their beauties to form an enchanting proſpect. The wearied traveller, jaded with the rough roads through which he has paſſed, now enters a flat country, where corn is waving on every ridge, and commerce extending its influence, to render the people comfortable and happy.

Before entering Banff, we croſſed the river Doveran, (the boundary between Aberdeen and Banff-ſhires,) over which an elegant bridge is built, we believe, at the expence of Government. Banff is a thriving well-built town; has ſeveral enterpriſing and public-ſpirited merchants; one of whom, Provoſt R. is celebrated for his extenſive knowledge in almoſt every branch of trade, and poſſeſſes a conſiderable influence both in the town and country. The ſalmon-fiſhery, at the mouth of the river, forms a valuable export article; and much corn is ſhipped from this place in ordinary ſeaſons. In walking through Lord Fife's policy and plantations, adjacent to the town, we ſaw the fineſt Poland oats that had come under our view this ſeaſon; indeed, they had received benefit from the extreme drought, and carried the proſpect of yielding an immenſe return.

To *Cullen*, 12 miles. The Earl of Findlater's eſtate begins at Banff, and ſtretches ſome miles farther than Cullen. The day was unfavourable when we viewed it, but, ſo far as we could judge, it appeared cultivated in a ſtyle ſuperior to the common run of eſtates, and reſembled a garden more than any tract of the ſame extent to be ſeen in Great Britain. The breadth of the low-land betwixt the hills and the Moray Frith is not great, perhaps not exceeding three miles; but the calculation is made at random, as the weather was foggy when we paſſed. The late Earl, whoſe memory will long be reſpected by every wellwiſher to his country, was the perſon who planned, and, in a manner, executed theſe

beneficial improvements, which have now reached maturity. He took ſome of the farms into his own hand, (we believe in 1754;) brought overſeers from England, well acquainted with improved huſbandry; incloſed his lands, and ſet a pattern to his tenants which was ſoon widely imitated.

We have always viewed the conduct of proprietors, who were inattentive to the welfare and proſperity of their eſtates, as not only hurtful to their own private intereſt, but to the public good. In many parts of Britain, where the tenantry are poſſeſſed of ſufficient capital, improvements are executed perhaps as judiciouſly, and at leſs expence, than when performed under the proprietor's direction, or thoſe appointed under him; but, in every diſtrict where the poſſeſſors of land are defective in capital ſtock, it is impoſſible they can accompliſh ſuch undertakings; nay, the very attempt is often attended with certain ruin; for the funds which ought to be uſed in cultivation, are thus directed to other purpoſes (which neceſſarily cauſes a loſs in the firſt inſtance), while the profits of the improvements attempted, are contingent and hazardous, and, at all events, are not immediately reaped. Many proprietors will not contribute a halfpenny to forward the moſt neceſſary works; others are limited and diſcouraged by entails, from expending money themſelves, or from giving encouragement, by ſuitable leaſes, to proper tenants; the conſequence unhappily is, that much of the country remains in a comparatively unproductive ſtate.

Cullen is a borough of little buſineſs, dependant upon Lord Findlater. The burgeſſes poſſeſs a conſiderable field of fine land adjoining the town. Barley and oats are the chief grains ſown in this county: little wheat is cultivated, from an idea very generally entertained, that the climate is too late for it: very few peaſe or beans, though the ſoil ſeemed well adapted to what is called the ſix courſe ſhift. Turnips are cultivated in conſiderable quantities; and ſome of the graſs fields appeared well laid down. *Bigg* has diſappeared ſince we croſſed the Doveran, and barley appears in place of it. Lord Findlater's policy, cloſe to Cullen, is beautiful; but the houſe is old faſhioned, and has not, we believe, been inhabited by the family for ſeveral years. Between Cullen and *Fochabers* there is another large peat manufactory, but not ſo extenſive as that mentioned in part 2d of this tour. As we advanced weſtward, the ſoil became more ſandy and barren, and *bigg* again appeared. About *Gordon Caſtle*, there are extenſive graſs lands, and the houſe itſelf may be the reſidence of a

ince; indeed, few princes are ſo well lodged. The caſtle, ough built at different periods, has a modern appearance. he old town of Fochabers is now removed, and a neat vil-age built at the diſtance of half a mile from the caſtle.

Leaving Fochabers, we croſſed the Spey, and entered the ounty of *Moray*. That river riſes on the borders of Locha-er, has a very rapid courſe, and, after flowing for ninety niles through the diſtricts of Badenoch and Strathſpey, falls nto the Moray-Frith a ſmall diſtance below this place. As here is no bridge ſo far down the river, though few places ſtand in greater need of ſuch a convenience, travellers are generally obliged to paſs it in a boat; but, at this time, the ſtream, from the continued drought, was very ſmall, and fordable without the leaſt danger *. When the Duke of Cumberland's army croſſed in April 1746, a few days before the battle of Culloden, the men waded through, ſhoulder deep, carrying their arms above their heads. It was in a great meaſure owing to the Highlanders neglecting to defend the ford, that the future ſucceſs of the Royaliſts may be attributed.

The low part of Moray is a diſtrict of great value and importance, reſembling the fertile county of Eaſt Lothian more than any other we have ſeen. A fine firth forms its northern boundary, while a range of black hills, few of them cultivated, hang upon the ſouthern extremity. In theſe circumſtances, Eaſt Lothian and Moray bear a ſtriking affinity; as alſo, in enjoying a dry climate and fertile ſoil: perhaps, in both reſpects, Moray exceeds Eaſt Lothian; for many of the inland parts of the latter are incumbent upon a colder ſubſoil than any we ſaw in Moray. We had often heard favourable accounts of the huſbandry practiſed here, and were led to form expectations which were not completely realiſed. The ſeaſon, indeed, was unfriendly to the growth either of corn or graſs upon dry ſoils; and to this, a part of the deficiency of the crop may with juſtice be attributed; but the general ſyſtem ſeemed imperfect, and ill calculated for ſuch ſoils as prevail in this county, as ſhall afterwards be more particularly deſcribed.

To *Elgin*, 9 miles. The ſoil, from the Spey weſtward, is chiefly of a ſandy nature; the crops were very indifferent, till we arrived in the neighbourhood of Elgin. Much woodland upon the road-ſide. Both wheat and rye fields were

* Since the above was wrote, we learn with pleaſure that the foundation-ſtone of a bridge over Spey has been laid by that worthy young nobleman the Marquis of Huntly.

now diſcernible; but few turnips, though the ſoil ſeemed admirably calculated for this root.

Elgin is an ancient town, ſituated on the ſouth bank of the Loſſie. Little buſineſs of conſequence appeared to be tranſacted here: a ſimilar remark is applicable to every place where agriculture forms the chief object in the neighbourhood. We here experienced the utmoſt politeneſs, from a gentleman to whom we were recommended, who kindly accompanied us in viewing the adjacent country.

To *Loſſie-mouth*, 6 miles. This is the ſea-port of Elgin, from whence, in favourable ſeaſons, a conſiderable quantity of grain is exported, and coals and other articles received in return; but the harbour is far from being convenient, or ſafe. Betwixt Elgin and Loſſie-mouth there are ſeveral extenſive fields entirely covered with ſtones, which, tradition ſays, were left by the Spey; it being ſuppoſed that this river, at a former period, had taken its paſſage in this direction to the Moray-Frith. Be that as it may, theſe ſtones greatly reſemble ſuch as are thrown upon the banks of the preſent channel. Some attempts have been made to plant the ground ſo covered with Scotch firs; but little ſucceſs has attended this well meant meaſure. The land adjoining the town of Elgin is very valuable. At Loſſie-mouth, we were recommended to the attention of a gentleman of great urbanity and information; in whoſe company we ſatisfactorily inſpected a conſiderable tract of the neighbouring country. The ſoil here is chiefly a ſand, or ſoft loam; and, from the accounts communicated, the crops of every kind were much inferior to what they are in common years. We were led to give full credit to theſe accounts; for the theory of huſbandry ſeems here well underſtood, while the execution is conducted upon ſound practical principles. The different fields were in good order; and no expence appeared to be with-held, in carrying forward every branch of improvement, conſiſtent with the local circumſtances of the diſtrict, to be afterwards mentioned.

From *Loſſie-mouth* to *Forres*, 18 miles. Paſt the weſt ſide of Spynie-loch, which is already partially drained, and an attempt is ſoon to be made to drain the whole, in an effectual manner. The loch contains, at leaſt, 1500 acres of rich ſoil, which, when completely drained, will prove a moſt valuable property. The houſe, or palace of Spynie, formerly the reſidence of the Biſhop of Moray, is ſituate upon the ſouth bank of the loch; and, when entire, muſt have been

an elegant and ſtately building. This biſhopric was, we believe, one of the beſt in Scotland; for, in 1563, when an account was taken of eccleſiaſtical benefices after the Reformation, more than 1200 bolls of barley, beſides wheat, oats, and money, were given up, and recorded in the book of Aſſumption, as forming the temporalities of the biſhopric, notwithſtanding that much of the revenue was previouſly dilapidated by the biſhop, who had ſeen the gathering ſtorm.

We viewed the eſtate of Gordonſton, which, from certain circumſtances, has, for ſome years paſt, been out of leaſe; and are ſorry to ſay, that the greateſt part of it appeared to be in wretched condition. The ſoil is, in general, of good quality; but the farms are by far too ſmall; while, from the dependent ſtate of the tenantry, the buildings are in a very ruinous ſtate. It is to be hoped that the reſpectable gentleman, now ſecured in poſſeſſion by the deciſion of the Supreme Civil Court, will adopt the neceſſary meaſures for improving this valuable eſtate. If we might preſume to offer a remark, it would be, that the whole property ſhould be arranged into ſizeable farms, and comfortable and convenient home-ſteads built upon each. There are plenty of good tenants in Moray; and ſuch will be required, before lands, ſo exhauſted, can be properly prepared, and brought under ſuitable cultivation.

Getting into the great road from Elgin to Forres, the ſoil appeared chiefly to conſiſt of dry, barren ſand; but, between the road and the Moray-Frith, we were informed that it was more valuable, being of a ſtrong caſt, and much of it adapted to wheat and bean huſbandry. Great damage has been ſuſtained, at different periods, in this low tract, from the barbarous practice of plucking the bent-graſs upon the ſea ſhore, which permitted the looſe ſand to blow in high winds, to the great detriment of the adjoining lands. Several hills, upon the ſide of the Frith, appeared to be compoſed entirely of ſand, and during a north or north-weſt gale, we ſhould think them very dangerous neighbours.

Around *Forres*, the ſoil is good, and decently cultivated. Moſt of the ground here is incloſed, and the fields have a pleaſant appearance. Perhaps the climate of this neighbourhood is earlier than in any part of Scotland,—even than the fertile and well ſheltered banks of the Tweed; at leaſt, every article of produce ſeemed further advanced than we had witneſſed in our progreſs; and, ſo long as we remember, the

firſt newſpaper intelligence, reſpecting the harveſt, has always been from this ancient royal burgh.

To *Nairne*, 11 miles. This is another *royal* burgh; notwithſtanding which, it is a very poor place: there we obſerved the firſt appearance of real diſtreſs, from the ſevere ſcarcity of grain; the lower order of the inhabitants having a ſqualid, emaciated look, exceeding any thing we had hitherto ſeen. This place may be conſidered as the march between the Engliſh and Erſe languages; at leaſt, we did not notice the latter earlier in our progreſs. A great proportion of the land between Forres and Nairne, is of an inferior quality, and the houſes wretchedly conſtructed. A fine bridge, over the water of Findhorn, has been lately built by that able engineer Mr. Burn of Haddington, who has been extenſively employed in all the northern counties.

The roads through Moray and Nairne ſhires are generally level; but having ſaid this, circumſtances preclude us from adding more in their commendation.

Before entering the county of Inverneſs, it is proper to wind up our details of Moray and Nairne ſhires, with a few concluding remarks. We offer them with diffidence, but truſt that they may, in ſome reſpects, be uſeful to the tenantry, and eſpecially to the proprietors of theſe diſtricts.

The ſoil of the lowlands, or what is commonly called the plains of Moray, may be claſſed under two diſtinct heads; viz. ſand and clay. The ſandy ſoils are generally two or three feet deep, incumbent on free-ſtone or gravel; and conſequently, like all ſoils of the ſame kind, require to be often refreſhed with moiſture. The clay ſoils are ſtrong and deep, and qualified to produce heavy crops, both of corn and graſs. As the climate is remarkably dry, (leſs rain falling here than in any part of Scotland), it is obvious that a moderate wet ſummer is neceſſary to inſure a good crop, and that even the wetteſt ſeaſon is more beneficial, under local circumſtances, than one of a ſevere, or even of a middling drought.

Agriculture was at a diſtant period ſucceſsfully practiſed in this diſtrict, and perhaps a comparatively improved huſbandry was earlier introduced than in any other part of Scotland, north of the Grampian hills. This early introduction of improvements may be aſſigned as the cauſe why the practice of the country has been ſo long almoſt ſtationary, or at leaſt why it has not kept pace with that of other countries, much further behind a century ago. As the land pays a tolerable rent in its preſent ſtate, the proprietors ſeem ſatiſ-

ed with things as they are, without attempting to introduce better ſyſtem of agriculture, or, by giving leaſes of a proper ngth, to afford ſuch encouragement as will ſtimulate tenants capital and enterpriſe to undertake the arduous taſk of ex-uting improvements at their own expence. The apathy of e proprietors is ſtrikingly diſcernible, in the general mean-ſs of the farm-buildings, which, in this diſtrict, (holding its lue in view), are meaner and more inconvenient than in y agricultural diſtrict of the iſland.

The improvement upon the practice, that would be attend-l with moſt advantage to thoſe concerned, is, a general in-oduction of the Norfolk huſbandry upon all the light ſoils, with ſome it is done already), and adopting the ſix courſe nſt upon the clay; viz. fallow, wheat, beans, barley, graſs, nd oats. If proper leaſes are granted, (which is a prelimi-ary ſtep), comfortable accommodations provided, good roads ade, and ſuitable rotations of crops introduced, we venture ſay, that no diſtrict in Britain may make a better figure in griculture than the county of Moray.

The following paragraph, written at Forres, is copied from e journal kept during our progreſs. It was written on e ſame day that we viewed the principal part of the diſ-ict, when the impreſſion thereby made on our minds was reſh, and unconnected with extraneous circumſtances: Moray has not yielded us ſo much ſatisfaction as expect-d. The crop is light, which may be imputed to the rought; but a great proportion of the land is foul, and not ept under any regular rotation. Very few ſizeable fields f grain are to be ſeen, the land chiefly lying in irregular atches, and not much clover ſown. Great blame falls up-n the proprietors, for neglecting theſe matters, as they hold ut no encouragement to the tenantry for incloſing, building, r for meliorations. The roads are worſe, the farm-ſteadings nore inconvenient, and, in a word, fewer improvements are oing forward here than in any county we have viſited. Few heep are kept: nor did we ſee many cattle. The whole at-ention of the farmers ſeemed paid to the raiſing of corn, ithout uſing the neceſſary means for accompliſhing it in an dvantageous manner. There are no doubt exceptions to heſe general remarks, and we could, with pleaſure, point out he meritorious conduct of individuals, were it neceſſary to nter upon particulars."

From Nairne to *Inverneſs*, 16 miles. Roads excellent, par-icularly the military one from Fort George. The land, for

7 or 8 miles eaſtward of Inverneſs, is generally of a good quality; carrying barley and oats, a few bad peaſe, and ſome rye. No clover, except in the vicinity of the town, where it is excellent. Little ſummer fallow; but a conſiderable breadth of potatoes, which appeared to be thriving. Saw ſome ſmall flocks of ſheep, tended by women.

Much room is left, in all this tract, for improvement; and, in our humble opinion, the ſoil and climate of the low diſtrict are well calculated for admitting every branch of modern huſbandry, provided a reſpectable tenantry were more generally introduced. Long leaſes are neceſſary at the outſet, for the encouragement of ſuch people; but, improvements being once ſet agoing, the country would gradually be brought into regular cultivation, without any expence to the proprietors; unleſs in the articles of building and incloſings, which, being permanent improvements, ſhould always be executed ſolely at their expence.

Having now arrived at the Highland Capital, it may be proper to ſuſpend the remainder of our tour, till next number; when, after viſiting the counties of Roſs and Cromarty, we will take the Highland road homeward, through Strathſpey, Badenoch and Athol, and from thence through the upper parts of Perthſhire, to Stirling.

Communications on American Husbandry.

(Continued from p. 169.)

A Deſcription of the Townſhip of Dartmouth, in the State of New-Hampſhire.

This townſhip is ſituated about 60 miles from the ſea, and 4 miles ſouth of the great river Connecticut, which is the weſtern boundary of New Hampſhire, and contains about 24,000 acres of land, owned wholly by one proprietor, except 20 lots containing 100 acres each, which are owned and occupied by 20 families, who were placed there by the proprietor of the townſhip. The neighbouring country is ſettling very faſt, and the great road leading into the back-country, paſſes through this townſhip. It is compoſed of a ſoil, excellent for producing every kind of corn, eſpecially wheat; alſo for graſs, flax, and hemp; it is accommodated with ſtreams for mills, and a river running through it; which by the annual overflowing of its banks, yields an inexhauſtible fund of

manure, enriching the neighbouring intervale lands bordering on its banks, which are extenſive, and equal in quality to any in the country. In this townſhip, the proprietor has 3 farms under improvement; one of which now yields 120 tons hay,—has a large ſtock of horned cattle, ſheep, &c. One other farm that yields 40 tons of hay; and the third yields 30 tons, and all of them capable of any further improvement; and of raiſing any quantity of wheat that the cultivator may chooſe. A ſaw mill, and a griſt mill alſo, are there, belonging to the proprietor. This townſhip is capable of making 200 farms of 100 acres, or might be divided otherwiſe into larger farms as may ſuit the owner.

This tract, with 12,000 acres more, adjoining to it, may be purchaſed on reaſonable terms, or the one half of it, provided the purchaſer would carry it on in a manner agreeable to the preſent proprietor, who would, in that caſe, hold the other half,—dividing the whole, both improved and unimproved. This purchaſe is well calculated for any gentleman who may have views of an extenſive cultivation, unembarraſſed with diſagreeable copartners, in which he might be aſſured of his intereſt being doubled in value in a very ſhort time, with the addition of the intereſt of his money.

Farms under improvement in this part of the country, when there are 50 to 100 families ſettled in the town, are ſold at 2 to 4 pounds per acre; yet the coſt of bringing them into improvement is inconſiderable, and, ſaving the coſt of buildings, are attended often with a profit, even in the firſt year's produce—that is, the firſt year's produce over-pays the whole expence of clearing the land, which may be ſeen in the experiments actually made in this townſhip, in Nos. 1, 2, 3, and 4. In No. B. may be ſeen a calculation of making a farm of 200 acres, according to the method which is practiſed here.

Experiment, No. 1.

Account of Felling, Clearing, Planting with Indian Corn, and Sowing with Wheat and Hay Seed, 7 Acres of Up-land, in the Township of Dartmouth, in the State of New Hampshire.

1779.					*Sterling.*		
June.	Cost of felling 7 acres, at 6s. 9d. per acre				L. 2	7	5
1780.							
May.	Cost of cutting up and clearing, 49 days work, at 2s. 3d. - - -				5	10	3
	Planting with Indian corn, including the seed				1	6	3
					L. 9	3	9
Aug.	Sowing the above land with wheat, viz.						
	7 bushels wheat for seed	L. 1	11	6			
	Hay seed - -	1	8	0			
	Labour of sowing and covering wheat and hay seed -	3	7	6			
					6	7	0
					L. 15	10	9
				Profit	31	19	9
					L. 47	10	6

Produce, viz.

1780.					*Sterling.*		
Oct.	Crop of Indian corn, 240 bush. at 2s. 3d. per bush. - - - -				L. 27	0	0
	Deduct for expence of harvesting -				4	0	0
					L. 23	0	0
1781.							
Aug.	Crop of wheat, bushels	134					
	Deduct for reaping, threshing, &c. -	25					
		109 nett, at 4s. 6d.			24	10	6
					L. 47	10	6

In this instance the season for clearing, by burning the wood and brush the first year, was favourable, and the crop of Indian corn good; but the crop of wheat was but indifferent, owing to some accidents that befel it.

Experiment, No. 2.

Coſt of Felling and Clearing Fourteen Acres of Up-Land, and Sowing it with Wheat and Hay Seed, in the Townſhip of Dartmouth, in the State of New Hampſhire, from the year 1780 *to* 1782, *and its produce.*

1780.		*Sterling.*		
June.	Felling 14 acres, coſt 6s. 9d. per acre	L. 4	14	6
1781.				
May & June.	Burning and clearing ditto, coſt	10	10	0
Aug. & Sept.	Sowed 14½ buſhels wheat, at 4s. 6d. per buſhel	3	5	3
	Hay ſeed ſowed, viz. clover and herds graſs	2	5	0
	Labour in covering the ſeed and ſowing	6	10	6
	Fencing	1	2	6
		L. 28	7	9
	Profit	27	17	3
		L. 56	5	0

1782.	PRODUCE, viz.		
Wheat,	buſhels	296	
Deduct for reaping	14 }	is 46	
Houſing and threſhing	32 }		
	Nett 250 at 4s. 6d.	L. 56	5 0
		L. 56	5 0

In this experiment, our mode of raiſing a crop of Indian corn was not practiſed, but put into wheat and hay ſeed immediately after clearing: This was done, becauſe the ſpring of 1781 was too wet to burn and clear the land in time to plant Indian corn, which ſhould be in May; but, in this inſtance, a profit was obtained of 27l. 17s. 3d. in an outſet of 28l. 7s. 9d. and 14 acres of wilderneſs land converted into graſs, ſuitable for paſture or mowing, that would yield 14 to 20 tons of hay per annum. Had a crop of Indian corn been alſo taken off, the profit would have been ſtill greater. In the ſame plantation, many tracts have been treated in the ſame way, by taking off a crop of Indian corn and another of wheat, and then laying down to graſs: But, in this and No. 1. more accurate accounts of the coſt and profit have been kept. Theſe may ſerve as ſpecimens for the information of thoſe who may wiſh to know our method, and the coſt of bringing land into cultivation.

Experiment, No. 3.

Coſt and Profit of Clearing and Sowing with Wheat 10 *Acres of Intervale Land, in the Townſhip of Dartmouth, in the State of New Hampſhire, in the years* 1777, 1778, *and* 1779.

		Sterling.		
1777.				
	Coſt of felling and clearing 10 acres, 100 days labour, at 2s. 3d. - - - L.	11	5	0
1778.				
May.	Ploughing the ſame with 4 yoke of oxen and 3 men, 12 days, at 15s. 9d. per day -	9	9	0
	Harrowing with 3 yoke of oxen and 2 men, 5 days, at 11s. 3d. - -	2	16	3
July.	Ploughing the ſecond time, 3 yoke of oxen and 2 men, 9 days, at 13s. 6d. -	6	1	6
	Harrowing the ſecond time, with 3 yoke of oxen and 2 men, 4 days, at 11s. 3d. -	2	5	0
Aug.	10 Buſhels winter wheat, for ſeed, at 4s. 6d.	2	5	0
	Sowing the ſeed, and harrowing the laſt time, to cover it - - - -	1	10	0
	L.	35	11	9
	Profit	41	1	3
	L.	76	13	0

1779.
Aug. Produce; viz.

Wheat -	390 Buſhels.			
Deduct for reaping, houſing, and threſhing -	50			
Buſhels 340 Nt. at 4s. 6d.	L.	76	13	0
	L.	76	13	0

This piece of land happened to be very ſtubborn, and required a greater ſtrength of cattle to plough it than is common. But it yielded well at 39 buſhels per acre; we call it a good crop at 20 to 30 buſhels per acre. In this inſtance, we ſee 10 acres reduced from a ſtate of nature, ploughed and ſowed with wheat, for the coſt of 35l. 11s. 9d., and the firſt crop taken off, overpays the coſt, and leaves a profit of 41l. 1s. 3d. This piece of land was ſowed with ſummer wheat the three ſucceed-

g years, and then laid down to graſs, and yields 3 tons of hay r acre, at one cutting. Intervale land is, generally, after firſt ſecond crop, very eaſy to till.

Experiment, No. 4.

r Account of the Coſt of Clearing 5 Acres of Intervale Land in the Townſhip of Dartmouth, and of 4 years Cultivation, with the Value of the ſeveral Crops taken off.

		Sterling.
176.		
	Coſt of felling 5 acres, and clearing up the ſame, it being thinly timbered -	L. 4 10 0
177.		
ay.	Ploughing ditto with 4 yoke of oxen, 2 men and a boy, 6 days, at 15s. per day -	4 10 0
	Harrowing with 3 yoke of oxen, and 2 men, at 11s. per day - - -	1 13 0
ly.	Ploughing the ſecond time - -	3 15 0
ug.	Harrowing the ſecond time -	1 4 0
	5¼ buſhels winter wheat for ſeed, at 4s. 6d.	1 3 7
		L. 16 15 7
	Profit,	9 19 11
		L. 26 15 6
78.	Produce, viz.	
	Wheat - 141 buſh.	
	Deduct for reaping 5	
	For houſing, &c. 3	
	For threſhing 14 — 22	
	Buſhels 119 at 4s. 6d.	L. 26 15 6
		L. 26 15 6

In this experiment, a profit of 9l. 19s. 11d. Sterling is given the firſt year's crop, beſides reducing 5 acres of land from natural to a ſtate of eaſy cultivation. The following will ow the coſt and profit in cultivating the ſame piece of land it was laid down to graſs.

1779.				
April.	Ploughing with 3 yoke of oxen, 2 men and 1 boy, 4½ days, at 11s. 3d.	L.	2	10 7
	Harrowing with 2 yoke of oxen, and 1 man, 2 days, at 6s. 9d.		0	13 6
May.	6½ bushels summer wheat sowed, at 4s. 6d.		1	8 2
	Harrowing the second time to cover the seed		0	13 6
		L.	5	5 9
	Profit		17	11 0
		L.	22	16 9

The land had only one ploughing this year: the stubble should have been ploughed in the preceding fall, after taking off the first crop of winter wheat; but, for want of time, through scarcity of labour, it was neglected, to the hurt of the crop this year.

Aug.	Produce of summer wheat 122 bushels			
	Deduct for reaping 6½			
	Threshing, &c. 14½			
	20½			
	Nett produce 101½ at 4s. 6d.	22	16	9
		L. 22	16	9
Oct.	Ploughing	2	5	0
1780.				
April.	Ploughing again	2	0	6
	Harrowing	0	10	6
	10 bushels flax seed sowed, at 4s. 6d.	2	5	0
	Harrowing to cover the seed	0	10	6
		L. 7	11	6
	Profit	32	12	6
		L. 40	4	0
Oct.	Produce in flax 2144 lbs.			
	Deduct the cost for pulling, rolling, and dressing 1072			
	Nett produce 1072 at 9d.	40	4	0
		L. 40	4	0

This year, flax was in great demand: the uſual price is 4½d. to 6d. per lib. The ſeed of this crop was loſt by accident, and therefore not credited.

1781.

April.	Coſt of ploughing, harrowing, and ſowing 10 buſhels of peaſe and 25 libs. of clover and 1 buſhel of herds graſs or fox-tail		L. 6	13 10
	Profit -		26	7 8
		L.	33	1 6
Aug.	Produce of peaſe	157 buſh.		
	Deduct for harveſting, threſhing, &c.	10		
		147 at 4s. 6d.	33	1 6
		L.	33	1 6

AGGREGATE.

Profit of 1ſt year - -	L.	9	19 11
Ditto of 2d ditto - - -		17	11 0
Ditto of 3d ditto - - -		32	12 6
Ditto of 4th ditto - - -		26	7 8
Total profit of 4 years	L.	86	11 1

The foregoing is the reſult of an experiment actually made on 5 acres of land in the Townſhip of Dartmouth, being on that kind of land which is called *intervale land*. The ſoil of this intervale is compoſed of the waſhing of high lands, and is extremely rich, and the ſoil is often 4 to 10 feet deep.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On the Means of increaſing the Quantity of Manure, the Uſe of Lime on different Soils, &c. &c.

GENTLEMEN, *June* 4. 1801.

IN compliance with the requeſt of your correſpondents, 'A NOVICE,' and 'W. C. of Aberdeenſhire,' I beg leave to

communicate my ſentiments on raiſing and uſing dung, and on the application of lime. In doing this, however, I beg it may be underſtood, that I am far from thinking myſelf able to give ſuch complete information as theſe correſpondents, and the readers of your Magazine, expect; but as I, in common with many others, ardently wiſh for information on theſe very important ſubjects; and as the requeſt of W. C. has not, by any communication in your laſt Number, been complied with, theſe obſervations may be the means of forwarding and extending their diſcuſſion by men better qualified for the taſk. If they have this effect, my object will be gained. With regard to raiſing a great quantity of dung upon a farm, I think very proper methods are recommended by your correſpondent C., at page 402 of your 4th Number: But, as the earth returns with intereſt every good committed to her care, and as I am perſuaded that nothing can be committed to her, for which ſhe will make a greater and more profitable return than good manure, every nerve ſhould be ſtrained to increaſe its quantity as much as poſſible. For that purpoſe, in addition to what is recommended by your correſpondent C., I would adviſe the collecting as great a quantity as poſſible of ferns, ruſhes, and the coarſe graſs of bogs, &c. even when unfit for hay. In many ſituations where theſe articles are plentiful, they are ſuffered to go to waſte, though they may be uſed with great advantage for littering the ſtables and fold-yards. Ferns and ruſhes do not rot ſo ſoon as ſtraw, but make a rich manure, and, if well turned over in the ſpring, are ſufficiently rotten in June. In winter and ſpring, when dung is taken from the ſtable or fold-yards to the fields, I conceive it is better to throw it up with forks, than allow the carts to be taken upon the dunghills, a practice which prevents a ſpeedy or complete fermentation. At theſe times, I have frequently mixed with the dung conſiderable quantities of rich earth *, taken from old

* Note by the Conductors.

The practice of mixing earth with dung requires to be managed with a delicate hand, eſpecially in forming a dunghill with materials that have not been previouſly ſubjected to fermentation. The ingenious author of his communication appears to be aware of the miſchief arifing from driving carts upon dunghills, which, by preſſing and conſolidating the maſs, greatly retards, and, in ſome inſtances, almoſt entirely prevents fermentation. The ſame injury is done by mixing any conſiderable quantity of ſoil with dung in an unfermented ſtate, which, by preſſing the ſtraw and other matters into a ſmall ſpace, ſo effectually excludes the air, that the dung, at the diſtance

dikes, ſediment of ponds formed by running water, and ſuch other places as were moſt likely to afford it, well mixed with freſh or diſſolved vegetable matter. Upon light gravelly hills, or ſterile clay, I have found manure thus mixed particularly uſeful. The rich earth alone would no doubt have very much improved ſuch ground, but, by being mixed with dung, it probably became impregnated with ſomething of a fertilizing nature, which would otherwiſe have been loſt.—Inſtead of mixing as above, I have occaſionally laid the earth a foot or two deep, as a foundation to build dunghills upon; at other times, I have laid it in ſituations where I could eaſily convey the drainings of fold-yards or the urine of fat cattle into it, and have no doubt but conſiderable advantages may be reaped from theſe methods of increaſing the quantity of manure. 'A NOVICE' probably thought it right to ſay ſomething to warrant his uſing that ſignature, and, accordingly, towards the end of his letter, has aſked, Whether dung ſhould be rotten ere it be ploughed in? or, whether, as he has ſometimes done, it ſhould be ploughed in rank, and ſuffered to rot in the ground? I think the latter very improper management, but it is no doubt purſued by ſome farmers, who do not haſten putrefaction by leading out and turning, not only becauſe theſe operations are troubleſome and expenſive, but becauſe they believe that the quantity of dung is thereby leſſened. They certainly leſſen the bulk, but probably not the quantity of *good manure*. Perhaps they

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diſtance of ſeveral months, will be found in a ſtate very little different from what it was when put into the heap; after all, when it is, in common language, ſaid to be rotten, it is, upon examination, found to be only decayed, and the produce, in place of abounding with rich mucilaginous ſubſtances, which all well-fermented dung does, is found to conſiſt almoſt entirely of vegetable earth. There is, however, a mode of applying earth to dunghills, that is not only ſafe, but highly beneficial: It conſiſts in covering the whole ſurface of the dunghill lightly, either with common earth or broken peat, every time the ſtables or fold-yard are emptied; a covering of that kind not being heavy enough to preſs materially upon the maſs, does not retard the fermentation, and has the great additional advantage of preventing the loſs daily ſuſtained about moſt farms by evaporation, and the diſſipation of the greateſt part of the valuable gaſſes generated during the proceſs of fermentation, all of which are entangled and retained by the earth; which, by that means, not only acquires high fertilizing powers, but renders the dung more valuable. When a proper ſyſtem is followed of carrying out the manure from the ſtables and yard to the dunghill—ſay once a-month, if it is ſpread equally over the whole, and a covering of the kind mentioned laid above it, a conſiderable addition may be made to the quantity of manure upon every farm yearly, not only without riſk, but with very great advantage.'

prevent the loſs of ſome very fertilizing particles, which are exhaled by the ſolar heat, or otherwiſe injured by the weather, when the dung is applied in its rough ſtate, and conſequently not properly covered in. There can be no doubt of a ſmall quantity of rotten dung making land more productive, than a much larger one rough or half-rotten. On the ſlovenly and unprofitable practice of applying it in this ſtate, more may be ſaid; but I ſhall not inſult your underſtanding by dwelling longer on the ſubject.

As little time as poſſible, I think, ſhould elapſe between the ſpreading of the dung and ploughing it in, and between the laſt operation and the ſowing of the ſeed. The mode of application ſuited to one kind of ſoil, may be of no uſe, or even injurious to another; and, as there is reaſon to apprehend that much valuable manure is miſapplied, we ſhould carefully compare the reſults of different modes of practice, endeavour to learn the food of vegetables, and how the application of manures to the different ſoils is calculated to increaſe that food, and furniſh the neceſſary ſupport to the plants. Some have aſſerted, that earth is the food of plants; others, water, and others, that it is principally oily particles incorporated with water. If we conſider that earth *alone* will bring no plants to perfection, we will readily be convinced that it is not the food we are in ſearch of. Some plants will flower in water, but they will not produce ſeed; and, I believe, the ſame may be ſaid of oil. Some practical men, as well as theoriſts, are of opinion, that earth and water, pure and unmixed, will not invigorate and bring to perfection even a very inferior crop; and others contend, that oil cannot be concerned in vegetation, becauſe it will not mix with water, and enter the veſſels of vegetables, &c. It will however enter theſe veſſels, and become well adapted to promote vegetation, by the intervention of alkaline ſalts or abſorbent earths. Of this laſt claſs, lime is the moſt powerful, and ſpeedily incorporates oil and water, thereby producing a mixture ſimilar, in appearance, to that milky liquor formed by the farinaceous part of corn ſoon after germination. It alſo poſſeſſes an attractive and retentive quality. Monſ. Fourcroy, in his chemiſtry, ſays, that it attracts moiſture and carbonic acid from the atmoſphere. I am induced to think that oil is a principal part of the food of plants, by conſidering, that the chemical analyſis of ſoils has proved that they contain it;—that all vegetables, corn, and other ſeeds, contain it, and that thoſe crops which produce the moſt of it, ſuch

as hemp, flax, rape, muſtard, turnip ſeed, &c. are the greateſt impoveriſhers of land. If oil be not concerned in vegetation, why do the beſt agriculturiſts reckon ſo much on thoſe rich manures which are known to contain moſt of it, ſuch as rape-duſt, hogs dung, the refuſe of ſhambles, &c.? Corn, it is well known, contains much oil, and, is not this the reaſon why the dung of corn-fed horſes is ſo remarkably fertilizing? Let us ſuppoſe the food of plants to ariſe entirely, or in a great meaſure, from oily particles, incorporated with water in the earth; that water is the vehicle of nouriſhment; and then try how this hypotheſis will ſtand the teſt of experience. If it is not ſupported by this teſt, it is ill-founded, and muſt be renounced; in which caſe, I hope ſome perſon will ſupply its place with a better, and that you will publiſh it in your Magazine. When I have admitted oil to be the principal part of the food of plants, I have reaſoned thus with reſpect to the application of lime and dung to land which has been long in tillage, and limed every fallowing; viz. as the water and oily particles in the land will not mix with alkali, or abſorbent earth, as lime greatly extends this operation, and as it has, on this land, been ſo often applied alone, is it not reaſonable to conclude, that its operations on the oleaginous matter have ſtimulated, ſo as to affect the almoſt total abſorption of the oily particles, leaving the land nearly a *caput mortuum*? Here I muſt remark, that, during a pretty long practice, I have invariably found land, managed in the way I have juſt deſcribed, not at all increaſed in fertility by lime, and almoſt uſeleſs for the growth of corn. Upon ſuch lands, deprived of their oily or fertilizing particles, by the qualities of lime cauſing them to be conveyed ſo repeatedly and largely to the ſupport of crops, is it not rational to ſuppoſe, that the application of rich, oily manure, ſuch as putrid dung, &c. is the moſt likely way of renovating this exhauſted ſoil, and of reſtoring its productive powers? Accordingly, upon ſuch ſoils, I have invariably found dung the moſt beneficial manure, and that, after a copious application of it, lime again became of ſome uſe. In ſoils which have been but a year or two in tillage, after having been long in paſture, and which, of courſe, contain much vegetable and oleaginous matter, lime muſt, according to this hypotheſis, be a proper manure, in aſſimilating the vegetable and oily matter, ſo as it may be applied to the ſupport of the crops. In ſuch caſes, and eſpecially in light ſoils, I have always found lime

a moſt powerful and beneficial manure; and dung *alone*, improper. In further ſupport of this, I ſhall ſtate a caſe or two, which I conſider as evidently deciſive of the utility of lime. A conſiderable quantity of freſh, light land, which contained much undiſſolved vegetable matter, was ploughed in autumn, having, for the firſt time, been all limed in the preceding year, except a large ſtripe acroſs the ridges. The June following it was prepared for turnips, and all dunged. The crop was pretty good, except upon this ſtripe, which brought no turnips to perfection.

In 1796, a field of light gravelly land, which had been long in paſture, and had received but little, if any, lime, was broken up, and ſown with oats. In the autumn of that year it was ploughed, and partly limed. In June following, a part of that land which received no lime was prepared for turnips, with that which had. The whole was ſimilar in ſoil, and equally dunged, ploughed, and ſown, in the ſame kind of weather; yet the turnips and corn upon the limed land were ſuperior to thoſe upon the land which received none. The graſs upon the former is very much ſuperior, preferred by the cattle and ſheep, and diſtinguiſhable at a great diſtance by its healthy colour. Upon ſuch ſoils as theſe, I apprehend, the good effects of lime will be conſpicuous; but they are alſo very diſcernible, even upon ſoils which are limed every fallowing, if the ground be kept a few years in graſs between fallowings, and eſpecially when dung is applied with the lime. Although I am not quite ſo confident as to the utility of lime upon ſtrong, as upon light lands, yet if the former were freſh, and contain much vegetable matter, or have been well dunged, I conceive lime may be applied with conſiderable advantage; but, conſidering their adheſive nature, and that lime, beſides its other operations, ſhould (by the diſſolution of the vegetable matter, and conſequent fermentation) divide the *tough* clay, much more is required, probably, than is generally applied. I entertain an opinion that lime divides ſtrong land, and mechanically binds light ſoils, and that theſe operations contribute to the fertility of both. In the firſt, it opens an eaſier paſſage to the manure, and the fibres of the vegetables; and, in the laſt, it prevents the exhalation of moiſture, or fertilizing particles. If we here conſider its attractive and retentive qualities, we will have ſeveral reaſons for the good effects it produces, and for the graſs on ſuch lands as have been well limed retaining its verdure much longer than that upon lands which

have received but little or none. The difference in the colour of the graſs is in favour of light freſh ſoils, upon which I have obſerved ſo many ſtriking inſtances of the good effects of lime, that I think it may be pronounced the *ne plus ultra* of their improvement.

In proof of what I have ſtated, as to liming *heavily* on ſtrong land, I ſhall ſtate the following caſe: A field of mine (which had before been limed) was ploughed, after having been about ten years in paſture. After producing firſt a culmiferous, and then a leguminous crop, it was fallowed, and ſown in a favourable ſeaſon. I applied to it about 250 Wincheſter buſhels of ſhell-lime per acre, but no dung; the crop of wheat was upwards of 40 Wincheſter buſhels per acre, though the land was wet, of a very inferior quality, and much mixed with poor blue clay.

I think, if the lime be of good quality, the quantity ſhould vary (with circumſtances) from 96 to 250 Wincheſter buſhels, and that the quantity of dung ſhould be from 16 to 40 (two horſe) cart loads per acre. I have no doubt of the application of both lime and dung for the ſame crop, being, in general, the moſt advantageous way of manuring. It is conſiſtent with my hypotheſis, and with almoſt all the practice I have ever obſerved.

There ſeems ſome different opinions amongſt farmers, as to the proper time of applying lime, and alſo as to the ſtate in which it ſhould be applied. Some contend, that the beſt time to apply it to dry land, intended for turnips, is in autumn. Others prefer May and June; and ſeveral farmers aſſert, that applying it even after it is almoſt ſo wet as to be fit for mortar, is not at all injurious to any quality of lime; while others maintain, that it is then nearly uſeleſs. I am not quite of this opinion, though I think the application of it in that ſtate detrimental to ſome of its properties. I have found, by experiments, that after being in the land, and expoſed to the rains and froſts of winter, it ſtill retains the quality of incorporating oil and water, and that lime-water alone will produce that union, though not ſo ſpeedily, as when all the component parts of lime are uſed.

To extend the ſyſtem of keeping ſoils freſh, by an alternation of graſs and tillage, ſeems to be the beſt way of promoting the intereſt of the landlord, the farmer, and the community; as, on ſuch, it appears that manures are applied with greater effect and advantage. By ſuch alternation, the lands in this part of the country are kept freſh; and it is, in

a great degree, owing to this, that they produce ſo well, and bear ſuch high rents. Theſe rents aſſiſt in defending us againſt the introduction of that ſyſtem of huſbandry which is purſued in many parts of the kingdom, to the ſouthward of us, and which appears to proceed from a greater attachment to the opinions and cuſtoms of our anceſtors, than we can here afford to entertain. I am yours, &c.

A NORTHUMBERLAND FARMER.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Compariſon between Large and Small Farms.

GENTLEMEN,

IF you think the following remarks and contraſt between a large farm and a ſmall one, worth inſerting in your valuable magazine, you may give it in your next number. If it had been done by a better hand, it would have been more acceptable in this part of the country.

That large farms tend to diminiſh the means of ſubſiſtence to the community, and thereby decreaſe the population of the country, is a poſition which, though advanced by many ſpeculative individuals, ſeems now to be admitted to have no foundation in fact. But that a large farm employs fewer people to work it, than if it were divided into ſmall ones, and by that means decreaſes the population, is a matter which ſeems to be more generally ſupported. To endeavour to refute the laſt of theſe aſſertions, I ſhall only draw the following contraſt between a farm of 150 acres, (that ſize being underſtood a large one in this part of the country), and one of the ſixth part of that extent, viz. 25 acres, (that being the favourite ſize here). This ſmall farm of 25 acres is laboured with one plough, drawn generally by four horſes of a ſmall breed, or a proportion of horſes, cows, and other young cattle; the occupier of the farm holds the plough, which is driven by one of the family, if any of them are capable of doing that work, which ſeldom fails to be the caſe, as boys or girls are underſtood to be equally qualified for the labour of the field. The wife of the farmer, in caſe of non-iſſue, or incapability of the children, is conſidered as obliged to undergo the drudgery of out-work. Upon ſuch

farms there is little occaſion for day-labourers, except an old woman or two, which they employ in the harveſt. The blackſmith is almoſt the only mechanic they employ; and I actually know the harneſs-maker, the wright, and the ſhoemaker *, all united in the ſmall farmer.

They, for the moſt part, live entirely upon the produce of the farm, and think they do well when they can, (in their own words) "live within themſelves;" that is to ſay, when their own poſſeſſion maintains them, without buying any thing. A farm then of 25 acres maintains only one family.

A farm of 150 acres will require 4 ploughs to labour it, of 2 horſes each; theſe 8 horſes require 4 men to work them; it will alſo require 2 men to threſh out the grain, and other bye-jobs, beſides day-labourers, employed in hay-time, hoeing turnips, potatoes, &c. There is alſo work for a number of mechanics about large farms, ſuch as ſmiths, wrights, harneſs-makers.

I ſhall ſtate the people employed as follows:

Upon a farm of 150 acres,

	Families.
The farmer	1
Ploughmen	4
Threſhers, &c.	2
I ſhall ſtate the different mechanics at	1
Other day-labourers occaſionally employed	1
Families	9

Upon 150 acres of land, divided into farms of 25 acres,

	Families.
Farmers	6
Mechanics and day-labourers occaſionally employed	1
Families	7

Thus, then, a farm of 150 acres employs daily 9 families, whereas, if it were divided into 6 farms of 25 acres, would only maintain 7, allowing 1 family to every 6 farms, for me-

* They wear the kind of ſhoes called Brogues.

mechanics and day-labourers, which is more than they do employ. As it is evident, a large farm must spare more grain than if it were divided into small ones, I shall not attempt to say any thing upon that head. A small farm, then, of the description mentioned, must be considered as a public loss; 1*st*, By diminishing the means of subsistence to the community; 2*dly*, By decreasing the population of the country, by employing fewer hands in agriculture; and, 3*dly*, By discouraging the mechanic, the manufacturer, and the merchant of every description.

I know the language of many is, "But who could be so "unfeeling as to dispossess these happy people, and force "them into another line of life; for certainly they must be "happy who, secluded as it were from the world, have no-"thing to think of but their own business.——They must "infallibly be contented!" These people however are deceived; for how can a man be happy or contented, that is obliged to undergo the hardest labour through the course of the whole year, and at the end have but a scanty subsistence?—and who is under the necessity of turning out his wife or daughter to drive the plough in the depth of winter! I say, again, How can a man under these circumstances be happy? Many a glowing picture has been drawn of the rural cottager, but how fallacious do such representations appear to those who are able to speak from experience.

I am, Gentlemen, yours,

A NORTH-COUNTRY FARMER.

PART II.

REVIEW OF AGRICULTURAL PUBLICATIONS.

Eſſays and Notes on Huſbandry and Rural Affairs: By J. B. Bordley. Philadelphia: Printed by Budd and Bartram. Sold by Thomas Dobſon, *South Second Street:* 591 *pages,* 8*vo.* 1799.

As this is the firſt American work upon Practical Huſbandry which has come into our hands, we ſhall pay it ſome attention, though, from the mode of arrangement adopted by the author, the taſk of reviewing it is more burdenſome than uſually occurs with ſimilar publications.

From the preface, we learn, that Mr. Bordley's attention to agriculture was firſt excited by peruſing the writings of Mr. Tull; and that he is chiefly indebted to Mr. Young, for his knowledge of European huſbandry. 'On the turn of middle age, and whilſt gradually quitting public employments, the author ſat down on a farm in Maryland, and became enthuſiaſtically fond of huſbandry. Farmers in the neighbourhood informed him of their modes of practice; but they taught him nothing of the principles of the art. Whilſt they knew how to practiſe in the manner common to the country, he knew neither principles nor practice; but began, however, with obſerving their practices, which he continued to imitate; until, gaining information from a number of inſtructive experiments, he was encouraged to deviate from ſome of them; and became more and more aſſured that great improvements might be made by profeſſed farmers, in this firſt of all employments, if they could be brought to relinquiſh the worſt of their habits.'

This extract will likely incline our readers to expect a good deal of ſpeculation among the practical information that is copiouſly detailed; nor will they be diſappointed. The chief part of the work is formed of little eſſays, occaſionally written and diſperſed among the author's friends: hence, a regular and perfect account of American huſbandry is by no means communicated.

The firſt eſſay is *upon ſyſtems and rotations in farming buſineſs*, written for the benefit of a Mr. Rigal, a gentleman from Manheim in Germany, who had taken a farm in the vicinity of Philadelphia. The leading outline of the eſſay is, that no kind of grain is to be cultivated upon the farm in queſtion; no horſe, ox, cow, nor other beaſt, paſtured; but the whole to be laid off in rye hay, (not rye graſs hay, but hay made from rye cut green), clover and timothy; and that the produce ſhall be conſtantly cut, and uſed for feeding animals in the houſe. A few acres are reſerved for potatoes, garden ground, &c. which are to have no connection with the other fields; but, even on them, no grain is to be ſown. Perhaps a rotation, ſuch as the above, might be profitable, for a while, in the neighbourhood of a great town; but, we ſuſpect, the ground in a few years would run foul: at any rate, the want of variety in the rotation would ſicken the crops, and curtail the produce conſiderably.

The next eſſay (it is difficult to ſay where the one ends and the other begins) is upon *grain rotations*. The author firſt gives what he calls *the Engliſh old courſe of crops*, viz. fallow, wheat, peaſe, barley; then the Engliſh *new courſe*, viz. barley, clover, wheat, clover, peaſe or beans; and afterwards draws a compariſon betwixt the two courſes, very much in favour of the latter. We by no means think that juſtice is done to the huſbandry of England, by what is ſaid reſpecting thoſe rotations; nor do we entertain high ideas of the author's knowledge, when he recommends ſowing clover amongſt wheat which had ſucceeded a clover crop.

The *American old courſe of crops* follows next, which appears to have been, maize, wheat, and lea paſture. The crops mentioned are truly contemptible. Several *improved courſes* are then ſtated, ſuch as maize, pulſe, barley, clover, wheat, clover. Likewiſe beans, barley, clover, wheat, clover, rye, clover; which, in our opinion, is an impracticable courſe, as clover would not grow (at leaſt in Britain) if ſown three times in ſeven years. In the arguments enforcing theſe improved rotations, our author appears to be an adept diſciple of his two maſters, Jethro Tull and Arthur Young, Eſqrs.

A particular deſign for a grain farm, written for Mr. Rigal, when he thought of ſitting down upon land at a conſiderable diſtance from town, now claims our attention. This farm is ſaid to conſiſt of 150 acres, of which the general diviſion is, *homeſtead* 10 acres, *permanent meadow* 20 acres, and *land under crop* 120 acres. The rotation upon this laſt is pulſe and roots as fallow crops, barley, clover, wheat,

clover, rye; one field to be manured each year. It gives us ſurpriſe to obſerve, that in all the eſtimates which accompany theſe rotations, fifteen buſhels of wheat *per* acre is the higheſt produce ſtated of this grain, which certainly does not afford a very promiſing view of Tranſatlantic huſbandry.

A very circumſtantial account of a farm-yard, adapted to the preceding ſyſtem, is preſented, which we ſhould be happy to ſee extenſively imitated in this country. When we ſtate the explanation of an accompanying plate, the moſt of our readers will join us in the remark.

1. Manſion.
2. Kitchen, oven, and aſh-hole.
3. Poultry houſe and yard.
4. Wood yard.
5. Laboratory.
6. Milk houſe.
7. Ice houſe.
8. Pigeon houſe.
9. Cloacas.
10. Family yard.
11. Pump.
12. Watering troughs.
13. Sow and pig ſtyes.
14. Cow houſe.
15. Boiling houſe.
16. Hogs.
17. Stercories.
18. Barn.
19. Sheep houſe and yard.
20. Chaiſe houſe and ſtable.
21. Waggon and cart houſe.
22. Implements of huſbandry-houſe.
23. Workſhop.
24. Herdſmens hovel.
25. Granary.
26. Farm ſtable.
27. Treading floor.

Each of theſe conveniencies is accurately explained. Upon the laſt article, (treading floor), the author ſays—'Though but ſix to eight horſes ſhould tread on it, yet it ought not to be of leſs diameter than 80 or 90 feet; but the tract or bed of wheat is narrowed to 12 or 15 feet. I was long, and greatly prejudiſed againſt *treading* wheat. But, experiencing the advantages of getting out the crops with *ſpeed*, and very *clean*, when on a permanent and well preſerved floor, with horſes gently trotted in ranks, diſtant and airy each rank from the others, the preference, in my opinion, is in favour of treading, over the moſt expert thraſhing with flails; ſo much ſo, that, conſidering the greater opportunities of pilfering, and lengthy troubleſomeneſs of thraſhers, I would prefer treading to having my large crops thraſhed for nothing.'

The following articles are next treated of:—*Clover*, of which the author thinks 4 lb., when ſown out of a box which he deſcribes, ſufficient for an acre; *wheat and clover; beans;*

new practices in the culture of maize and wheat; hemp and farm yard manure. Under the laſt article, the author reprobates the American practice of ſtacking hay and fodder in the fields, and feeding cattle round the ſtacks and fodder houſes. Though, in many Engliſh counties, the ſame practice is ſlovenly followed, yet, as it is a waſteful conſumption of the provender, and an unprofitable uſe of the manure, we cordially concur with him in recommending, that all cattle ſhould be either houſed, or kept in fold yards during the Winter months.

The author is even for going farther; and, with much force of argument, demonſtrates, that *ſoiling* is infinitely preferable to *paſturing*, as the graſs will not only go much farther, but that the animal will thrive equally well. We ſhall extract a few of his arguments.

'Oppoſed to our unmade paſtures, are the *made* paſtures of Europe, and ſome parts of America: and oppoſed to *all paſturing*, is *ſoiling*. Soiling is common in Flanders, and is advancing into extenſive uſe in Germany and in England. It is to the preſent purpoſe, that theſe practices and their effects be compared.

'Advantages in *paſturing* are, that *rich* graſs paſture keeps grown cattle at the rate of one and a third acre to a beaſt, during the ſix or ſeven warmer months: *common* paſture, at the rate of two acres to a beaſt. Attendance on them in paſtures is very little. They range at pleaſure, and drop their manure on the field; ſo that labour in heaping, carting out, and ſpreading it, is ſaved. The diſadvantages are, the graſs and the ground are trod, and reduced in value: the paſtures require coſtly diviſion fences: the dung is ſcattered on the ground, expoſed to exhalation and waſte by ſun and wind, ſo as to be greatly reduced: the horſes and oxen are driven to the ſtable, with much waſte of time, and ſome vexation, and conſequent abuſe.

'The advantages of *ſoiling* are, that the ground requires but few or no diviſion fences: grown cattle are kept at the rate of a fourth part of an acre to a beaſt, during the ſix warmer months; their manure is all well preſerved, and given to the ſoil when and where it is moſt wanted, and in the beſt condition: the ſoil is untrod, and left mellow and lively: the horſes, oxen, and cows are always up *, ready for uſe, without loſs of time: they are kept cool, ſhaded, and leſs worried by flies: they acquire good coats,

* Except that, for a few hours after they are returned to the ſtalls on the morning watering, they may be let out to ſtroll and rub themſelves in the farm-yard, from 11 o'clock till 3, then put up in the ſtalls; by which they will not have time to drop much dung in the yard; and what is there dropt ſhould be barrowed to the ſtercory. Carried *immediately* to the ſtalls, after being watered, they dung and ſtale plentifully in the ſtalls; then, being turned out, they do not dung much whilſt in the yard.

and full fleſh, on a leſs expence of food. When it is objected to the laying aſide diviſion fences, that there would be, at times, bad ſeaſons, when graſs could not be cut and carried in, becauſe of great rains, or of cold drying winds, which check the growth of graſs, ſo that it would be requiſite there ſhould be ſome fields divided off for the beaſts to run on at thoſe times; the anſwer is, that there is another way of providing for the cattle, and that much preferable. In towns, we ſee horſes and cattle are kept upon *hay* and *ſtraw* the year round, and that it agrees with them. A quantity of hay is therefore to be kept in ſtore, as a *proviſion againſt ſuch untoward ſeaſons* as ſhall deprive the beaſts of their meſs of cut graſs. Prudent farmers deem it requiſite always to have ſome ſtock of old hay.'

The following paragraph does not convey a favourable impreſſion of American farmers. We charitably hope that the picture is too highly coloured.

'But, in many parts of America, are idle, improvident people, maſters of farms, who ſpend their time in taverns, or other places of waſteful amuſement: any where, rather than at home. Theſe haunts are at the expence of their *domeſtic* happineſs. Sooner or later they bring on them debts, wants, and grating claims of creditors. Such a people can never be brought to ſoil cattle, or at all improve their farms. Where is ſolid comfort to be found, if not at *home?* The meanneſs, the ſelfiſhneſs, and the folly of theſe *huſbands*, *fathers*, or *maſters*, are conſpicuous, degrading, and ſhameful; who, regardleſs of *wife*, *child*, and *dependents* claiming their protection, their affections, and their attentions; and even regardleſs of the true intereſts of their precious ſelves, fly from their own happineſs, in the moment when they mount their horſes, and hurry to the tavern, the race, nine-pins, billiards, exceſs upon exceſs of toddy, and the moſt nonſenſical and idle chat, accompanied with exclamations and roarings, brutal and foreign to common ſenſe and manners as the mind of wiſdom can conceive of depraved man. Had theſe men, ſo deficient in character, been trained but a few years among the orderly, thoughtful good farmers of ſome neighbouring diſtrict, they would have learnt valuable leſſons for conducting their farms, themſelves, and their domeſtic affairs, greatly to their comfort and advantage, and to the comfort due to their families and dependents; to whom they owe more than they are accuſtomed to feel for them. There are, on the other hand, thoſe who, with induſtry, aim at providing for their families; but it is not with an honeſt mind, and fairneſs of reputation. The ſtrength of theſe is in low cunning. If, indeed, they wiſh to be perfect in that deteſtable of all qualities, *country-cunning*, they need not go far from home; unleſs for the ſake of

embelliſhing the ſatanical talent with ſome variety. They might then go among the thoughtleſs claſs of people in neighbourhoods diſtinguiſhed for more of this baſe quality than of provident induſtry, fairneſs and honeſt candour.'

In the ſection upon cattle and ſheep, the author condemns the attempts that have been made to introduce big-boned animals into America; and thinks the old breed of the country, which have the fore and hind quarters nearly alike in weight, is much to be preferred. Northward from the Suſquehanna, the old breed appears moſtly to be ſupplanted, by new kinds imported from Europe, which are deſcribed as being nearly one-third heavier in the fore than hind quarters. We believe theſe large lubberly beaſts are not now ſo much in faſhion in England as formerly; and, moſt certainly, the profit of keeping them is inferior to that of middle ſized, and better proportioned animals.

According to our author, thoſe, who may be ſtyled the aboriginal farmers of the country, are not the beſt diſpoſed to the introduction of improvements. We believe that his ſentiments on this head, are agreeable to what has been recogniſed in other countries.

'Improvements in agriculture will probably be firſt introduced amongſt us by ſoldiers, ſailors, phyſicians, clergymen, or others, who become huſbandmen with minds unfettered by the confined views and habits in which common farmers are trained, according to thoſe which had been fixed on, and handed down through many generations. Attentive huſbandmen will, at firſt, only look on, aſhamed to imitate; which would imply deficiency in their own practices; yet, after a while, they will cautiouſly begin to adopt certain of the approved new practices. Varying theſe, in ſome unimportant particulars, they will cheriſh them as diſcoveries altogether their own. It is a ſort of apology they make to themſelves, for their imitating improvements pointed out by men they deem ignorant of what themſelves practiſe, and deem to be farming.'

Separating grain from the ſtraw, before thraſhing machines were invented, was generally conſidered as the moſt difficult operation upon extenſive farms. In the Southern American States, the antiquated and barbarous practice of treading it out with horſes ſtill prevails; and, as the greateſt part of our readers are happily unacquainted with ſuch a mode of ſeparation, the account here given cannot fail to prove intereſting and entertaining to them.

'*Treading Wheat.*—This is an univerſal practice within the peninſula of Cheſapeak; and in the early ages, was performed in the old countries by oxen; as it ſtill is in Barbary and ſome other countries. In Britain, and in all the American ſtates northward of Maryland, the flail is the common inſtrument for thraſhing out wheat; both modes are fixed habits in the reſpective countries. Oxen have been tried in Maryland, by a perſon who had been uſed to tread with horſes, and he found them very exceptionable. I have had wheat from Barbary, which was extremely dirty.

'I was always much hurt by the injury done the horſes, in my former aukward manner (the common practice of the country) of driving them looſe; and withal, their driving, kicking, and joſtling each other, helter-ſkelter; but am now quite pleaſed with treading wheat, ſince haltering, and leading them in ranks, prove the labour or injury is leſs, than from ploughing them half a day in a maize field. The above are the only objections occurring to me, againſt treading wheat with horſes. The advantages are: an entire crop of wheat beat out before the end of July, which perfectly ſecures it againſt the moth-fly; leaves but little opportunity to pilferers, and is ready for an early market, often the beſt. To hire thraſhers, or put my labourers to thraſh it out with flails, the time ſpent would give abundant opportunity for thieving; which is avoided by the ſpeedy method of treading, when in about a fortnight three thouſand buſhels may be ſecured, inſtead of near a hundred days that flails would require.

'I preſume not to offer inſtruction to farmers who are experienced in treading on large permanent floors properly kept, and with horſes in regular ranks; but, to the leſs experienced and judicious, I ſubmit the method I have uſed of late, as the beſt within my knowledge. My floor is unincumbered with any fence. A barn 60 feet ſquare, is in the middle of it; around which, the horſes travel on the bed of ſheaves, about 25 feet broad; ſo that, the diameter of the whole is 135 feet.

'In my treading, twenty-four horſes are formed at ſome diſtance from the floor into four ranks; and when the floor is ready laid, one of the ranks has the word given to advance. For the ſake of order and regular work, the boy, who is mounted on one of the horſes, advances in a walk, with the whole rank haltered or tied together, and enters on the bed of wheat, walking the horſes upon the track laid with wheat: another rank is ordered to follow, as ſoon as the firſt is ſuppoſed to have obtained a diſtance equal to a fourth part of the circumference of the bed: and ſo of the other ranks. They are forbid to go out of a walk, till, having walked upon the bed five or ſix rounds, word is given to move on in a ſober, ſlow trot; and to keep the ranks at their full diſtance from each other, as the four cardinal points of the compaſs. Regularity and deliberate movements are neceſſary, for preventing con-

fuſion. The gentle trot is continued till the horſes have travelled eight or nine miles, which is their firſt journey; and then they are led off to be foddered, watered, and reſted; while the trodden light ſtraw is taken off as deep as to where the ſheaves ſtill lie, ſomewhat cloſe, and but partially bruiſed: this is called the firſt ſtraw, or firſt journey.

'As ſoon as this firſt ſtraw is off, one-third of the width of the bed is turned over on the other two thirds, from the inner ſide or circle of the bed, which narrows the track of the next journey. The horſes are again led on, and trot out their ſecond journey, till the ſtraw be again light and clear of wheat. It is then taken off, as deep as to what lies more cloſe. The horſes are again foddered, and allowed to reſt, whilſt the outer third of the bed is turned upon the middle part of the bed. Then tread the bed a third journey, till enough. This ſtraw being taken off, the whole remaining bed is turned up from the floor, and ſhook out with forks and handles of rakes. The horſes tread this well, which finiſhes their journeys; unleſs it be to run them a while on the chaff and wheat, the better to ſeparate them. The whole being now ſhoved up from the floor, with heads of rakes turned down, the wheat and chaff are put up into heaps on the floor, five or ſix on my great floor: And thus is finiſhed the day's work; in which moſt of the time is taken up in breaking the ſtacks, laying down the ſheaves, carrying off the ſtraw, turning and ſhaking the grain out from amongſt the ſtraw; and, laſtly, collecting the chaff and grain into ſecure heaps on the floor, which is alſo ſwept, for ſaving ſcattered grains in ſeparate parcels, to be next day cleaned ſeparately from the general maſſes of chaff and wheat.

'A neighbour, viewing the treading of wheat on my floor as above practiſed, ſaid, the method is admirably eaſy to the horſes; and that moſt of the time is ſpent in taking off, and carrying away the ſtraw. But he thought it would be a ſaving, if the outer half of the bed ſhould be trod till enough; and then ſhift the horſes on the inner half of the bed; and, whilſt this is treading, the ſtraw to be carried off from the outer half firſt trodden.'

We ſuſpect, that the corn lands in America are very ſlovenly reaped. In the reſult of ſome experiments, it is ſaid, that 200 acres of wheat were cut in twelve days, with twenty-three ſickles; which is only about one and three-eighth ſickles to the acre. This imperfect cutting may be ſuppoſed to be one of the cauſes why the crops are ſo defective. To make decent work, it will require at leaſt four hands to an Engliſh acre of wheat; and, if neatneſs and accuracy are ſtudied, and the crop heavy, that number will be found inſufficient.

We have next a long eſſay on the *nature and principles of vegetation*, being the ſubſtance of anſwers made to queries ſelected from a paper of the Board of Agriculture in London.

From this, an extract ſhall be given upon a future occaſion.

We obſerve 'a propoſal for a ſtate ſociety for promoting Agriculture; and that the education of youth ſhould direct them to a knowledge of the art, at the time they are acquiring other uſeful knowledge, ſuitable to agricultural citizens;' which was preſented to the Legiſlature of Penſylvania, and rejected, it is ſaid, 'by *huſbandmen, who were principally to be benefited.*' The propoſal is of ſuch a ſalutary nature, and its objects ſo clearly deſcribed, that we were going to expreſs our ſurpriſe at the rejection; but we remember ſo many things of the like nature happening in our own country, that our ſurpriſe has, in a great meaſure, ceaſed.

In the concluding part, we obſerve a good deal of practical information, under the title of *notes* and *intimations*. We extract a few of them.

'*Veals.*—In ſelling veals to butchers, their haggling was extremely diſagreeable; and to avoid it, I ſometimes either at once broke off, or gave up to their offers. At length, after weighing veals killed for my family, I fixed on a price by live weight, at which to ſell. The butchers at firſt refuſed to be fixed at any rate; they afterwards came to, and agreed at 3d. live weight.

A veal alive weighed 146 lb.

—The four quarters 70; which is within 3 lb. of half the live weight.

'At 3d. live weight, this veal would coſt them 36s. 6d.; but, for ſuch, they uſed to give me 32s. to 33s. on the foot. The firſt ſold by live weight were 4 veals; medium live weight 133½, which averaged 33s. 2d. a veal. They uſually ſold at 7d., ſcarcely any part under 6d., ſometimes 7½d. and 8d. Their gain was above 40 *per cent.* Lord Kaims ſays, butchers gain but 5 *per cent.* in Scotland. They diſliked the method by live weight; becauſe of the certainty of reducing uſual profits, gained from their ſuperior ſkill in eſtimating the weight and value of veals.

'*Hams.*—

	lb.	lb.
1788. Dec. 2.—20 of my family hams, trimmed, weighed green,	321	or each $16\frac{6}{10}$
1789. June 30.—They weighed, when full ſmoked,	256	$12\frac{8}{10}$
Evaporation	65	$3\frac{8}{10}$

The loſs of weight $20\frac{1}{4}$ *p. cent.* or about one-fifth.

Dec. 22.—A tenant's hams; 2 weighed, green and trimmed	- -	lb. 31
Aug. 11.—The ſame when ſmoked	-	26
Evaporation	-	5 or 16 *p. cent.*

'The tenant's were not ſo much ſmoked or dried, as he cured them for ſale, and to weigh.

'*Family pickled Beef.*—Two pounds *brown ſugar* are mixed with a quarter pound of *ſaltpetre*, pounded *very fine*. One half of it is rubbed together with a little fine *ſalt* over the beef. Four gallons of brine, bearing an egg, are boiled and ſkimmed; and when *cold*, the remainder of the *ſugar and nitre* is added. The beef is then ſunk in the pickle, and kept down with a weight.

'*Family dried Beef.*—Rub the beef with a mixture of 1 lb. *ſugar*, $\frac{1}{8}$ lb. of *ſaltpetre*, and a little *ſalt*; the nitre, eſpecially, in a very fine powder. The beef is to remain 3 days in a tub, and is then again rubbed with a little more of the ſame ingredients. The beef, returned to the tub, is to lie two or three days more, and is then hung up to dry. It ſeems as if this is meant to be dried without ſmoke; but others ſmoke it very lightly, and then hang it, expoſed to wind and air, in a dry room. Cellars, and all *damp* places, are improper for keeping meat, either ſalt or freſh.

'*Barrelled Beef.*—Being at an inconvenient diſtance from market, and ſeldom able to ſell my beeves, I found it adviſeable to depend rather on barrelling up from the graſs, than on ſelling on the foot. From ignorance of a proper mode of performing the buſineſs, part of my beef in the firſt attempt ſpoiled. On four years experience, I prefer the following, which procured a good character to my beef at market: I killed between 24 and 30 beeves, yearly, the laſt week in October, from the graſs.

'The beeves may be kept up from food and drink two days; the better if cloſe and dark, and then ſlaughtered; and by ſo faſting, are found to *bleed better*, are handled *lighter and cleaner*, and every way *look better*. Previous to this practice, I found, that upon the firſt ſalting, and the meat lying in open barrels *four* days, there has been drawn out by the ſalt, 8 *gallons of bloody juices* from 432 lb. of beef. This is of the nature of pining of herrings, by the Dutch. Compare that with this method of *ſalting* and *curing*.

'The barrels are to be ready, ſweet, and well trimmed; and the *ſalt* previouſly waſhed or refined, and ground ſmall, before the beeves are to be ſlaughtered. I killed 14 beeves as *to-day*,

and ſalted them to-morrow morning. *Delay* in ſalting, is injurious; ſo is expoſure to the air, even after it is ſalted. The pieces are, therefore, packed into the tight barrels, piece by piece, as they are ſalted; inſtead of bulking them on a frame or dreſſer to drain, as had been the practice; and, inſtead of remaining two weeks to drain, expoſed to the air, they are now 6 or 8 days left to drain, in cloſe barrels, headed up tight.

'Having thus ſecured the firſt day's beef, in barrels, to drain (or pine); on the third day, other 14 beeves were killed, and managed in the ſame manner.

'Coarſe ſalt *waſhed*, but not ground, having alſo been previouſly ready, is diſſolved in fair cold water, till no more can be diſſolved on ſtirring. Let it ſettle a day or two; ſkim off the top: pour off all but the dregs. When perfectly *cool* and *clean*, it is ready to be poured on the repacked beef.

'The meat is to be taken out of the barrels; *reſalted*, and cloſely *repacked* in the ſame barrels. Immediately head them up perfectly cloſe; and they remain ſo. In a few days afterwards, bore a hole in one of the heads, or the bulge of each barrel, and fill up the barrels with the *prepared* and *boiled juices of the meat*, ſaved from the firſt ſalting and barrelling, as under mentioned. Every time of filling, the barrels, being rolled, leaves room for more liquor. When there is no more of the prepared juices, the barrels are next to be repeatedly filled with the plain ſtrong brine, made as above, from the waſhed coarſe ſalt, till they can take no more after ſtanding a while.

'Let not the barrels of meat be expoſed to the ſun, as is often the caſe, by rolling them out of doors, and leaving them there longer than need be. *Damp* is bad for ſalt meat as well as for freſh; therefore, ſtore the barrels in a *dry* place, the *cooleſt* to be found.'

There is much good ſenſe in the note upon ploughs; with which, we ſhall finiſh this article.

'*Ploughs.*—A habitual fondneſs for *wheels*, has greatly lumbered and depreciated the ploughs of England. Ingeniouſly built Norfolk wheel-ploughs have been imported into America; but were very ſoon laid aſide. In oppoſition to this huge complex machine, the Engliſh Rotherham plough is every thing: a ſimple chip ſwing-plough, with a clean but full bow mould board. The ſhare and mould board are ſuperior for cutting and turning old ley or graſs land; but in horſe-hoeing, it is inferior to the common bar ploughs of Maryland and Penſylvania, as it requires more uſe of the ploughman's hands. The common fault in the American ploughs, is moſtly in the mould board. Almoſt any mould board would be preferable to the *hollow* fine ſhaped board, which the fancy of ſome delight in; as injudicious watermen prefer the ſharp entrance and *hollow* forepart of the bottoms

of ſailing veſſels. The plough and the boat have to force their way through reſiſting mediums. For gaining this, ſharpneſs of entrance is all in all with heedleſs fancy.

'But what avails this firſt clear entrance, if oppoſition, in a more abrupt and direct manner, a little further aft is the conſequence? View the *hollow* mould board of a ſharp fair looking plough, after it has been worked a while, or whilſt working; what a glut of friction or oppoſition it has experienced, juſt in the hollow; and how it labours, through accumulated maſſes of earth unthrown off forward. On the other hand, ſee the mould board having a fair eaſy entrance, and full bow, in a gradual ſwell as it riſes; how it turns off the earth, and rids itſelf, or avoids accumulated reſiſtance, juſt as a well formed boat does the water; and this, with the leaſt poſſible friction, or wearing of the mould board.'

If the different ſubjects, diſcuſſed in this work, had not been, in ſeveral reſpects, novel to our readers, we would have apologiſed for the length of the article; but, as an account of American huſbandry cannot fail to prove intereſting to Britiſh farmers in general, we truſt no apology is neceſſary.

Upon the whole, though we conſider the writer as poſſeſſed of an active mind, and under the influence of liberal principles; yet, in ſeveral inſtances, we judge his obſervations are founded more upon theory, and the opinion of others, than upon the ſolid foundation of practice and experience. N.

Selections from the Correſpondence of General Waſhington and James Anderſon, L. L. D., F. R. S. &c. &c. in which the cauſes of the preſent ſcarcity are fully inveſtigated; 8*vo*, 88 *pages*. Cuming, *London*, 1800.

Dr. Anderſon's reputation, as an enlightened and experienced agriculturiſt, is ſo firmly eſtabliſhed, that every thing proceeding from his pen is entitled to reſpect and attention. A conſiderable part of this pamphlet being, however, employed upon political matters, we ſhall only examine what more properly belongs to the object embraced in the title page.

In our laſt, we noticed the cauſe aſſigned by a learned Profeſſor, as producing the exiſting ſcarcity of grain, which we viewed as altogether unfounded; and, after the moſt deliberate conſideration, we are under the neceſſity of giving ſomething like the ſame opinion of the cauſes deſcribed by Dr. Anderſon. We join him, however, in thinking, that 'the real ſpirit of the times ſeems to depreſs agricultural operations;' though we by no means believe, that the conſequent depreſſion has produced ſuch an alarming ſcarcity

of grain. It only increaſed a ſcarcity, which would have happened under the wiſeſt laws, and moſt judicious adminiſtration.

To Dr. Anderſon, however, the ſcarcity gives no ſurpriſe; becauſe he views it as a neceſſary conſequence of previous political arrangements. Our readers will attend, that Dr. Anderſon here alludes to the Corn laws, which have, by him, (we think erroneouſly), been long conſidered as diſcouraging to agricultural improvement. In addition to theſe laws, Dr. Anderſon, with more juſtice, ſtates the exaction of tithe, the encouragement given to idleneſs by the Engliſh poor laws, and the general want of leaſes, as circumſtances which have leſſened our agricultural proſperity. Allowing full force to every argument offered upon theſe points, ſtill it is evident, that ſome other cauſe was required, to occaſion ſuch a diſproportion betwixt the crop of 1798 and that of the ſucceeding year. Dr. Anderſon aſſigns no other than thoſe already mentioned, though the laws and cuſtoms of the country were preciſely the ſame during theſe two ſeaſons. What is truly wonderful, he does not diſcloſe to his illuſtrious correſpondent, the leaſt information concerning the ſingular adverſities which crop 1799 encountered; but, like many philoſophers, treats the influence of the elements with contempt and neglect.

Though Dr. Anderſon has ſaid a good deal, and, in our humble opinion, very much to the purpoſe, reſpecting agricultural grievances, yet we cannot ſuppoſe for a moment, that he has, '*fully inveſtigated the cauſes of the preſent ſcarcity.*' Every ſentiment, nay every word, which he has uſed in the inveſtigation, would have been equally applicable to the ſubject in 1798, as at the æra which produced this correſpondence. N.

Gleanings from Books on Agriculture. London: Johnſton, &c. *196 pages, 8vo. Price 4s.* 1801.

This is confeſſedly a compilation; but, in many reſpects, it may prove uſeful, at leaſt to the young and unexperienced agriculturiſt. It is arranged in the Dictionary form, and the ſeveral proceſſes of rural management are, in general, pretty accurately detailed.

We ſelect a part of one article, as a ſample of the work.

'BARLEY.

1. Soil.

a. Should be rather light than ſtiff, but of ſufficient tenacity and ſtrength to retain the moiſture.—On clays, the grains are coarſe and brown.

2. SEED.
   a. Should be of a pale lively colour and brightiſh caſt, without any deep redneſs or black tinge at the tail; if the rind be a little ſhrivelled, it is the better.
   b. Requires being changed, more than any other grain.
   c. In a dry ſeaſon, if ſoaked in clean or ſtagnate water for twenty-four hours, it will come up a fortnight earlier than dry ſeed: the light corn that floats ſhould be ſkimmed off. Some little riſk attends ſoaked ſeed, it being apt to burſt, if much rain fall before it is come up.
   Barley that has been wetted for malting, and begins to ſprout, will ſoon come up.
   d. In a trial made between ſowing it drilled and broad-caſt, the extra produce of the drilled crop was about 20 buſhels *per* acre, beſides near two buſhels of ſeed ſaved. A ſingle grain ſet or drilled will ſometimes produce eighty ſtalks.
3. PLANT.
   a. Rolling it makes it tiller into a greater number of ſtalks.
   b. If the blade grows rank, mowing is better than feeding with ſheep, as the ſheep are apt to bite ſo low as to injure its future growth.'

The motto upon the title page is—'*Arthur Young obſerves, that the farmers in ſome parts of the kingdom get rich, by modes of huſbandry unknown in other parts;*' which is ſo far true. But it is evident, that the benefit to be gained from publications of this nature, will depend, in a great meaſure, upon the degree of knowledge poſſeſſed by the compiler. If he is well informed, judicious and profitable practices will alone be recommended; whereas, if his knowledge is limited and ſuperficial, erroneous management will be enforced, with equal zeal as the moſt perfect and enlightened huſbandry.

We are rather inclined to think, that our author is defective in practical knowledge; and various parts of the work might be condeſcended upon, as proofs of this deficiency. Witneſs in p. 108, where 'lime is ſaid to be a bad manure for clay;' and p. 196, where the yam potatoe is ſaid 'to be probably only cultivated in the counties of Mid-Lothian and Stirling.' In the account of the thraſhing machine, p. 191, Winlaw's, and the portable machine, receive equal encomiums with thoſe which are wrought upon the principles of the flax mill; though there is as great a difference in their reſpective values, as betwixt a pound Scots and a pound Sterling. N

PART III.

EXTRACTS FROM AGRICULTURAL WORKS.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

GENTLEMEN,

IF you think the following extract from the *Journal de Phyſique* will be acceptable to the readers of your Magazine, it is very much at your ſervice. P. H.

Method of Preparing Cheeſe in the Lodeſan, commonly called PARMESAN CHEESE.

The ſize of theſe cheeſes varies from 60 to 180 lb., depending conſiderably on the number of cows in each dairy.

During the heat of ſummer, cheeſe is made every day; but, in cooler months, milk will keep longer, and cheeſe is made every other day. The ſummer cheeſe, which is the beſt, is made of the evening milk, after having been ſkimmed in the morning and at noon; mixed with the morning milk, after having been ſkimmed at noon. Both kinds of milk are poured together into a copper caldron, capable of holding about 130 gallons, of the ſhape of an inverted bell, and ſuſpended on the arm of a lever, ſo as to be moved off and on the fire at pleaſure. In this caldron, the milk is gradually heated to the temperature of about 120 degrees: it is now removed from the fire, and kept quiet for five or ſix minutes. When all internal motion has ceaſed, the *vennet* is added. This ſubſtance is compoſed of the ſtomach of a calf, fermented together with wheaten meal and ſalt: and the method of uſing it is, to tie a piece, of the ſize of a hazel nut, in a rag, and ſteep it in the milk, ſqueezing it from time to time. In a ſhort time, a ſufficient quantity of vennet paſſes through the rag into the milk, which is now to be well ſtirred, and afterwards left at reſt to coagulate.

In about an hour, the coagulation is complete; and then the milk is again put over the fire, and raiſed to a temperature of about 145 degrees. During all the time it is heat-

ing, the maſs is briſkly agitated, till the curd ſeparates in ſmall lumps: part of the whey is then taken out, and a few pinches of ſaffron are added to the remainder, in order to colour it. When the curd is thus broken ſufficiently ſmall, nearly the whole of the whey is taken out, and two pails-full of cold water are poured in. The temperature is thus lowered, ſo as to enable the dairy-man to collect the curd, by paſſing a cloth beneath it, and gathering it up at the corners. The curd is now preſſed into a frame of wood, like a buſhel without a bottom, placed on a ſolid table, and covered by a round piece of wood, with a great ſtone at the ſtop. In the courſe of the night it cools, aſſumes a firm conſiſtence, and parts with the whey: the next day, one ſide is rubbed with ſalt, and the ſucceeding day the cheeſe is turned, and the other ſide rubbed in the ſame manner. This alternate ſalting on each ſide is practiſed for about forty days. After this period, the outer cruſt of the cheeſe is pared off; the freſh ſurface is varniſhed with lintſeed oil; the convex ſide is coloured red; and the cheeſe is fit for ſale.

No. I. A Statement of the Prices of Middling Wheat *per* Quarter, according to the Winchester Measure; also, of the Quantity, in Quarters, of all Grain exported, and of the Quantities of all Grain imported, from the year 1697 to the year 1799, both years inclusive, divided into periods.

Years.	Average Price of Middl. Wheat.	Wheat and Flour.		Barley and Malt.		Oats and Oatmeal.		Rye.		Peas and Beans.	
		Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.
From 1697 to 1701	42s. 8d.	336,171	7,085	29,965	361	1,446	2,055	75,492	3,972		
1702 - 1707	25 11	645,831	129	842,568		735	594	247,418			
1708 - 1711	49 9	353,135	2,038	607,860	1,335	18,720	324	221,451			
1712 - 1715	37 8	682,410	16	967,128	1	57,931	21	108,444		72	
1716 - 1719	33 1	306,427	20	1,427,917		48,549	383	160,593		327	
1720 - 1724	28 10	751,250	148	1,733,122	707	42,906	61,744	199,695		50	161
1725 - 1729	37 7	408,759	114,901	1,159,513	29,047	36,978	256,351	52,407	174,252	39	23
1730 - 1734	25 9	1,146,964	94	1,210,182	3,896	24,918	123,104	89,051		202	3
1735 - 1739	30 10	1,613,345	85	1,235,009	7	68,496	6,767	77,352			29
1740 - 1744	28 7	1 005,759	13,015	2,111,361	15,628	38,445	122,496	243,429	12,138	60	3,858
1745 - 1749	27 9	1,903,183	394	2,217,971	40	505,112	19	437,204			53
1750 - 1754	30 5	3,101,092	484	2,041,480	56	43,127	80,541	295,936		120	288
1755 - 1759	36 2	588,638	162,082	935,279	15,905	22,119	102,036	115,888	9,922	32	2,935
1760 - 1764	30 7	1,957,350	132	1,590,677	9,280	48,772	587,133	180,482			151
1765 - 1769	43 2	394,461	967,118	412,154	103,413	60,016	892,585	32,564	123,852	71,256	49,400
1770 - 1774	47 6	116,062	374,024	224,024	238,749	122,894	1,172,544	2,902	57,660	82,411	86,346
1775 - 1779	40 0	752,718	926,322	519,960	205,730	176,915	1,679,635	19,572	66,463	204,810	248,802
1780 - 1784	45 8	613,463	1,045,606	590,729	236,108	117,394	839,172	23,105	116,817	92,349	128,866
1785 - 1789	48 11	681,672	483,031	971,631	195,437	109,365	2,115,985	103,953	54,303	95,252	106,699
1790 - 1794	45 11	633,314	1,543,417	152,840	485,115	87,232	4,217,538	22,155	171,151	73,720	279,959
1795 - 1799	62 9	183,005	2,532,535	89,065	258,322	81,190	3,174,406	1,227	225,726	67,900	186,760

N. B. The above average prices of Middling British Wheat are taken from the Accounts kept in the Audit Book of Eton College, calculated at Lady-Day and Michaelmas each year.

The average price of Middling British Wheat, taken from Mr. Catherwood's tables, from the 26th September 1799 to the 26th September 1800, was - - - In England 106s. *per* Quarter.
In Scotland 83s. 4d. *per* do.
For crop 1800, as stated in the Books of Eton College 112s. 7d. *per* do.

No. II.

An account of the Quantity of Foreign Wheat and Wheat Flour imported into Great Britain, from the 26th Sept. 1799 to 26th September 1800—the Flour converted into Wheat, by allowing 3 cwt. to each quarter.

	Quar.	Bush.
Total—London - -	558,430	0
Out-Ports - -	505,243	2
Scotland - -	121,980	4
Grand total - -	1,185,653	6

No. III.

Account of the Average Price of the several sorts of Grain for England, from the 28th September 1799 to 27th September 1800, distinguishing the price of each quarterly.

	Per Quarter Winchester Measure.											
	Wheat.		*Rye.*		*Barley*		*Oats.*		*Beans.*		*Peafe.*	
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
Average of 1ſt Quarter	89	1	55	7	43	0	32	3	60	0	54	4
Ditto of 2d do.	102	0	70	0	49	11	35	3	64	2	60	10
Ditto of 3d do.	119	1	86	1	63	2	45	10	74	4	73	11
Ditto of 4th do.	113	10	75	3	59	8	40	8	69	2	65	2
Ditto of the year -	106	0	71	9	53	11	38	6	66	11	63	8

No. IV.

Average Prices of Grain and Oatmeal for Scotland, from September 14. 1799 to September 13. 1800, distinguishing the price of each quarterly.

	Per Quarter Winchester Measure.												*per boll 140 lb.*	
	Wheat		*Rye.*		*Barley*		*Oats.*		*Beans.*		*Peafe.*		*Big.*	*Oat-meal.*
	s.	d.	s.	d.	s.	d.	s.	d	s	d.	s.	d.	s.	d.	s.	d.
Av. 1ſt Q.	70	8	35	9	32	2	27	5	48	10	48	9	29	1	24	11
Do. 2d do.	75	10	41	1	38	1	31	1	55	9	54	3	35	4	31	4
Do. 3d do.	91	5	63	8	55	6	47	3	82	5	85	6	49	4	42	1
Do. 4th do.	95	7	65	5	56	11	48	0	86	9	89	1	52	7	43	0
Do. of year	83	4	51	6	45	8	38	5	68	5	69	5	41	7	35	4

Years.	Average Price of Middl. Wheat.	Wheat and Flour.		Barley and Malt.		Oats and Oatmeal.		Rye.		Peas and Beans.	
		Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.
From 1697 to 1701	42s. 8d.	336,171	7,085	29,965	361	1,446	2,055	75,492	3,972		
1702 - 1707	25 11	645,831	129	842,568		735	594	247,418			
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1712 - 1715	37 8	682,410	16	967,128	1	57,931	21	108,444		72	
1716 - 1719	33 1	306,427	20	1,427,917		48,549	383	160,593		327	
1720 - 1724	28 10	751,250	148	1,733,122	707	42,906	61,744	199,695		50	161
1725 - 1729	37 7	408,759	114,901	1,159,513	29,047	36,978	256,351	52,407	174,252	39	23
1730 - 1734	25 9	1,146,964	94	1,210,182	3,896	24,918	123,104	89,051		202	3
1735 - 1739	30 10	1,613,345	85	1,235,009	7	68,496	6,767	77,352			29
1740 - 1744	28 7	1,005,759	13,015	1,111,361	15,628	38,445	122,496	243,429	12,138	60	3,888
1745 - 1749	27 9	1,903,183	394	2,217,971	40	505,112	19	437,204			53
1750 - 1754	30 5	3,101,092	484	2,041,480	56	43,127	80,541	295,936		120	288
1755 - 1759	36 2	588,638	162,082	936,279	15,905	22,119	102,056	115,888	9,922	32	2,935
1760 - 1764	30 7	1,927,350	132	1,590,677	9,280	48,772	587,133	180,482			151
1765 - 1769	43 2	394,461	967,118	412,154	103,413	60,016	892,585	32,564	123,852	71,256	49,400
1770 - 1774	47 6	116,062	374,024	224,024	238,749	122,894	1,172,544	2,902	57,660	82,411	86,346
1775 - 1779	40 0	752,718	926,322	519,960	205,730	176,915	1,679,635	19,572	66,463	204,810	248,802
1780 - 1784	45 8	613,463	1,045,606	590,729	236,108	117,394	839,172	23,105	116,817	92,349	128,866
1785 - 1789	42 11	681,672	483,031	971,631	195,437	109,365	2,115,987	103,953	54,303	95,252	106,699
1790 - 1794	45 11	633,314	1,543,417	152,840	485,115	87,232	4,217,538	22,150	171,151	73,720	279,959
1795 - 1799	62 9	183,005	2,532,535	89,165	258,322	81,190	3,174,406	1,227	225,720	67,900	136,760

N. B. The above average prices of Middling Britiſh Wheat are taken from the Accounts kept in the Audit Book of Eton College, calculated at Lady-Day and Michaelmas each year.

The average price of Middling Britiſh Wheat, taken from Mr. Catherwood's tables, from the 26th September 1799 to the 26th September 1800, was - - - In England 106s. *per* Quarter.
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	Quar.	Bush.
Total—London	558,430	0
Out-Ports	505,243	2
Scotland	121,980	4
Grand total	1,185,653	6

No. III.

Account of the Average Price of the several sorts of Grain for England, from the 28th September 1799 to 27th September 1800, distinguishing the price of each quarterly.

	Per Quarter Winchester Measure.											
	Wheat.		*Rye.*		*Barley*		*Oats.*		*Beans.*		*Peaſe.*	
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
Average of 1ſt Quarter	89	1	55	7	43	0	32	3	60	0	54	4
Ditto of 2d do.	102	0	70	0	49	11	35	3	64	2	60	10
Ditto of 3d do.	119	1	86	1	63	2	45	10	74	4	73	11
Ditto of 4th do.	113	10	75	3	59	8	40	8	69	2	65	2
Ditto of the year -	106	0	71	9	53	11	38	6	66	11	63	8

No. IV.

Average Prices of Grain and Oatmeal for Scotland, from September 14. 1799 to September 13. 1800, distinguishing the price of each quarterly.

	Per Quarter Winchester Measure.												*per boll 140 lb.*	
	Wheat		*Rye.*		*Barley*		*Oats.*		*Beans.*		*Peaſe.*		*Big.*		*Oat-meal.*	
	s.	d.	s.	d.	s.	d.	s.	d	s	d.	s.	d.	s.	d.	s.	d.
Av. 1ſt Q.	70	8	35	9	32	2	27	5	48	10	48	9	29	1	24	11
Do. 2d do.	75	10	41	1	38	1	31	1	55	9	54	3	35	4	31	4
Do. 3d do.	91	5	63	8	55	6	47	3	82	5	85	6	49	4	42	1
Do. 4th do.	95	7	65	5	56	11	48	0	86	9	89	1	52	7	43	0
Do. of year	83	4	51	6	45	8	38	5	68	5	69	5	41	7	35	4

No. V.

count of the quantity of Wheat and Wheaten Flour carried coaſtwiſe from the port of London in the laſt ten years, diſtinguiſhing each year.

		Wheat.		*Wheaten Flour.*	
		Q.	B.	Q.	B.
om 1ſt Jan. to 31ſt Dec.	1790	13,294	4	7,958	7
— —	1791	17,974	4	8,473	7
— —	1792	22,656	4	8,989	0
— —	1793	33,466	3	6,140	0
— —	1794	43,562	5	10,587	4
— —	1795	47,617	5	8,208	0
— —	1796	159,354	4	11,645	4
— —	1797	84,204	5	12,013	1
— —	1798	88,711	3	11,159	6
— —	1799	138,902	0	13,164	4
— 30th Sept.	1800	162,911	5	22,127	7

No. VI.

count of the quantity of Wheat and Wheaten Flour brought coaſtwiſe into the Port of London in the laſt ten years, diſtinguiſhing each year.

		Wheat.		*Wheaten Flour.*	
		Q.	B.	Q.	B.
om 1ſt Jan. to 31ſt Dec.	1790	211,999	5	83,066	6
— —	1791	239,035	1	97,358	3
— —	1792	266,070	6	111,650	0
— —	1793	230,676	0	109,100	1
— —	1794	225,741	5	130,078	1
— —	1795	196,162	1	127,207	4
— —	1796	164,298	4	130,163	6
— —	1797	259,461	4	174,730	2
— —	1798	259,469	0	142,177	5
— —	1799	269,525	1	142,182	1
— 30th Sept.	1800	121,604	5	81,205	0

No. VII.

Account of the Quantity of Foreign Wheat, Wheaten Flour, Barley, Oats, Rye, Beans, and Peas, imported into England since the opening of the Ports on the 26th Sept. 1799, to the 27th Sept. 1800.

	Barley.		*Beans.*		*Oats.*		*Peaſe.*		*Rye.*		*Wheat.*		*Wheat Flour.*		
	Q.	B.	Q.	B.	Q.	B.	Q.	B.	Q.	B.	Q.	B.	cwt.	q.	lb.
From 26th Sept. 1799 to 5th Jan. 1800 - - -	4,618	3	6	0	79,471	7	1,944	5	12,119	7	173,395	0	43,705	1	0
Quarter ending 5th April -	1,067	7	650	7	17,494	6	328	6	3,055	5	31,039	2	14,235	2	14
Quarter ending 5th July - -	13,786	7	6,077	3	124,874	7	7,555	3	67,944	6	396,076	2	85,428	0	24
From 5th July to 27th Sept.	41,560	7	6,416	7	224,871	2	6,736	5	65,308	6	431,610	7	176,761	0	7
Total——	61,034	0	13,151	1	446,712	6	16,565	3	148,429	0	1,032,121	3	320,130	0	17

No. VIII.—Account of the Quantity of Foreign Grain imported into Scotland, from the opening of the Ports on the 26th Sept. 1799, to the 27th Sept. 1800, distinguishing the Quantity imported into each of the Ports, respectively.

	Wheat.		*Wheat Flour.*			*Barley.*		*Oats.*		*Oat-meal.*	*Peaſe.*		*Beans.*		*Rye.*		*Rye-Meal.*		
	Q.	B.	cwt.	qr.	lb.	Q.	B.	Q.	B.	BOLLS.	Q.	B.	Q.	B.	Q.	B.	cwt.	qr.	lb.
Aberdeen	1,337	1½	254	1	12	1,628	6¼	1,347	2	—	16	6	—		—		—		
Ayr	2,827	6	136	2	0	—		—		—	—		—		—		—		
Alloa	3,112	0	—			173	0	1,122	1	—	—		—		—		—		
Anſtruther	22	1	—			432	0	149	6	—	108	0	—		—		—		
Borrowſtounneſs	25,085	4	202	0	0	700	0	12,210	4	—	211	0	650	0	915	0	—		
Campbeltown	—		—			—		14	4	—	—		—		—		—		
Dunbar	—		—			—		290	2	—	—		—		—		—		
Dundee	3,883	1	—			339	7	1,213	3	—	163	1	—		7	0	—		
Inverneſs	36	0	—			—		—		—	—		—		—		—		
Kirkcaldy	1,381	0	88	3	0	390	0	1,116	4	—	161	0	—		—		3	2	0
Kirkcudbright	0	4	—			—		—		—	—		—		0	4	—		
Leith	62,012	3	3,115	3	0	3,121	2	14,239	2	—	2,348	3	—		58	0	—		
Montroſe	6,376	6	—			1	0	262	6	—	0	2	—		—		—		
Perth	3,403	5	—			—		2	0	—	—		—		—		—		
Port-Glaſgow	1,599	3	5,416	0	27	169	0	—		—	—		10	6	—		—		
Glaſgow	423	0	—			—		—		—	—		—		—		—		
Greenock	3,115	0	16,246	3	27	—		640	0	117	—		—		—		425	3	0
Totals	114,615	2⅔	25,460	2	10	6,954	7¼	32,608	2	117	3,008	4	660	6	980	4	428	5	0

On the CORN LAWS.

Extracted, by permiſſion of the Rev. Mr. Findlater, from the Manuſcript Survey of Tweedale.

THE beſt corn laws ever introduced into Scotland, were certainly the acts of Parliament 1449 and 1469; with the gradual extenſion of the principles of theſe ſtatutes, through the liberal interpretation of our Judges; *affording aſſurance to the cultivator of the ſoil, of reaping the fruits of his labour, and of his capital, by communicating ſecurity to his tenure.* The act of Parliament 1748 falls under the ſame deſcription; and much remains in expectation from individual exertion, as an enlightened ſenſe of ſelf-intereſt ſhall gradually be diffuſed through the claſſes of landed proprietors, and of profeſſional farmers, in regard to the proper conſtruction of leaſes.

In regard to the corn laws, properly ſo called, the views entertained by landed proprietors and farmers ſeem to be, that the price of corn ſhould be artificially enhanced, by conſtant bounties upon exportation, and by the prohibition of importation, except in clamant caſes of more than ordinary ſcarcity and dearth. And, when it is conſidered how many excluſive privileges have been obtained againſt theſe claſſes, by the addreſs of merchants and manufacturers, (in monopolies of the home market, ſecured to them by prohibitions of importation of ſuch articles as they deal in; in bounties upon the exportation of ſuch articles; and monopolies of the home produced raw material of their manufacture, by prohibitions of its exportation in an unmanufactured ſtate); it is not ſurpriſing that the former claſſes ſhould beſtir themſelves, in endeavouring to obtain excluſive privileges in counterbalance.

The claſſes of merchants and manufacturers, (who have, in general, been more ſucceſsful in perſuading the public at large of the coincidence of the public good with their private views), ſeem to aim, either at allowing the market of grain to take its natural courſe, without encouragement of bounties upon exportation, or prohibitions of importation of that of foreign growth; or elſe at the prohibition of exportation, and encouragement of importation: that corn being in low price,

wages (which, upon an average, are ſuppoſed to bear a proportion to the price of grain), may alſo keep low in proportion, and allow them to afford the articles of manufacture at that low rate which ſhall ſecure a preference in the competition, either of the home or foreign markets.

The Legiſlature ſeems to ſteer a middle courſe, in compromiſing theſe oppoſite views; though, were it not for the difficulties, nearly inſuperable, which occur in altering ſyſtems, long eſtabliſhed and interwoven into ſo many different connections and dependencies, it might probably be more beneficial to lay every thing open, in regard to manufacture and commerce, as well as the market of grain.

To prevent the price of grain from falling too low, to the diſcouragement of agriculture, the Corn laws, at a certain rate of price, prohibit importation; and, in proportion as the price ſinks ſtill lower, allow of exportation, or encourage it with a leſs or greater bounty. To prevent, on the other hand, the price from advancing too high, to the diſcouragement of manufacturers, the ports are opened for importation, and exportation is prohibited, at a certain height of price; and, in proportion as the price increaſes, a leſs or greater bounty is allowed upon importation. A ſyſtem, thus profeſſing to embrace, at once, two objects of ſuch important magnitude, as the encouragement both of the agricultural and the manufacturing intereſts of the country, wears a moſt alluring appearance, highly faſcinating to the imagination of every man of public ſpirit, and enlarged views. It ſeems doubtful, however, if the effect correſponds to the magnificence of the profeſſion.

The intention of the Corn law ſyſtem ſeems to have been, by force of continual interference of regulation, to keep the prices as near as may be to a medium; either the natural medium of the market; or, perhaps, (as near as could be gueſſed) to a medium a little exceeding the natural, in favour of home agriculture; or a little below it, in favour of manufactures. It ſeems, however, exceedingly difficult to aſcertain the natural medium in a commodity ſo fluctuating in price; and, of courſe, to fix the exiſting rates of market at which exportation or importation ſhould be encouraged or prohibited, ſo as to be certain, whether the regulations, ſo far as they go, ſhall have the effect intended, or an oppoſite one; unleſs, indeed, a medium is intended, ſo widely deviating from the natural, as to allow of no riſk or miſtake;

which, however, ſeems never to have been the object in view. It ſeems alſo equally difficult to come at the real ſtate of the exiſting rate of the market, from a proper claſſification of the country into diſtricts, from whence to take returns, upon which to form an average; as alſo to obtain the true return, when ſuch claſſification has been made. To take the return, meanwhile, from particular ports, without a general average of the country, either as the rule for opening or ſhutting that port, or other ports, would ſeem to lay the ſyſtem open to the intereſted machinations of individuals, or ſmall combinations. It is evident, alſo, that the rates fixed upon muſt be altered from time to time, according to the difference of the value of money; and that, too, at ſhorter periods, in proportion as the medium fixed upon as the one aimed at, deviates little from the natural.

A ſyſtem embracing ſuch a multiplicity of objects, muſt neceſſarily be complex in its arrangements, difficult in execution, and probably open to more ſources of error, in proportion to its complexity—and the queſtion ſtill recurs, *Cui bono?*

If, as has been alleged, the quantity of import and export of grain bears but a very inconſiderable proportion to the internal conſumpt of Great Britain; in that caſe, the effect of all regulations muſt be inconſiderable. But, farther, laws of this nature have, indirectly, a reaction, which, in a great meaſure, balances the action they are intended directly to produce. In encouraging, by a bounty, exportation in cheap years, they *force* out more of that plenty than would naturally have flowed out of itſelf; and, conſequently, prevent, ſo far as their operation goes, the remainder of that plenty, which otherwiſe would have reſted, from alleviating the dearth of a ſucceeding year of ſcarcity. In like manner, in dear years, the importation *forced*, by a bounty, above what would have been imported from cheaper countries, from a view to the profit naturally afforded by the high price of the home market, has an equal tendency, ſo far as it goes, to depreſs the prices, in ſucceeding years of plenty and cheapneſs, below the level to which they would have fallen. If theſe interferences had any ſenſible effect in heightening natural tendencies, it would ſeem, therefore, to be of a double nature, and to operate to the heightening of prices in a dear year, and lowering them in a cheap year; as well as to heightening them in a cheap year, and lowering them in a dear year.

If Corn laws are intended merely to keep the markets at their natural medium; as their effect muſt be inconſiderable any way in heightening thoſe tendencies, which operate of themſelves; and as the exceſs of effect produced by them, above that of natural tendencies, tends as much, in one way, to diſturb, as, in another, to preſerve the equilibrium; in all probability, it might be as well to leave things entirely to their natural courſe; except, perhaps, in caſes of very diſtreſſing dearth, when it might be proper to increaſe that importation, which would naturally take place, by a bounty; though, even in ſuch caſes, much diſcretion is neceſſary; and all buſtling ſhould be avoided, leſt violent interference ſhould excite alarm, and (as in ſeaſon 1795) augment thoſe evils it was intended to cure.

When the difficulties of framing a ſyſtem upon proper principles are conſidered, and the chance of its being erroneous from the firſt; the complicated arrangements neceſſary to keep the ſyſtem ageing, with the numberleſs chances of error through the whole detail of practical execution; and the ſmall effect to be produced in all ordinary caſes; it will probably appear, that a continually operating ſyſtem would be attended with no benefit which would counterbalance the trouble of putting the regulations in force; and that no interference is requiſite, but in extreme caſes of dearth or cheapneſs.

The market of corn is always precarious; but the conſtant intermeddling nature of a ſyſtem of continually acting regulations, (which, upon ſmall variation of price, interfere, by bounties or prohibitions, on one ſide or the other, to change the *data* of the merchant's calculation), has apparently, in ſome degree, a tendency to introduce greater uncertainty into the trade; making it become more a ſubject of gambling ſpeculation to deſperate adventurers, and excluding from it all the more ſteady and ſober-minded.

Conſiderable alarm, in regard to the declining ſtate of agriculture through the kingdom, ſeems to have been excited by the publication of Colonel Dirom, upon the Corn Laws 1790. From that publication it would appear, that, from the year 1688 till about the year 1750, (a period, during which the Corn Laws were moſt favourable to exportation, and inimical to the importation of foreign grain), our export of grain gradually increaſed, till it roſe to an annual average of 800,000 quarters above our imports; but that, from that period, a melancholy reverſe took place, in conſequence, as is alleged, of a change of ſyſtem to one leſs fa-

is out of the queſtion. In the caſe of money lent for hire, for mutual accommodation, upon mere principles of equity, it ſeems perfectly juſt that the hire or intereſt ſhould not be determined in an invariable ſpecific proportion to the capital advanced, or at ſo much *per cent.*; but that the lender ſhould receive more or leſs, in proportion to the profit which the uſe of money can afford: Nor can any ſtandard be deviſed for apportionating the reſpective ſhares of profit betwixt the borrower and lender, but the exiſting rate of the money market. Where capital is ſcarce in proportion to induſtry, and its profits conſequently high, an higher rate of intereſt will be afforded by the induſtrious for the uſe of capital: Where the reverſe takes place, the rate of intereſt muſt be beat down by the competition of capital for employment: Nor does there appear to be any iniquity in demanding more, or offering leſs for the uſe of money, according as the market will allow, than for any other article in commerce. All laws counteracting theſe natural tendencies, will themſelves be counteracted. Laws, fixing the *maximum* of intereſt, and condemning an higher rate under the name of uſury, are evaded, in diſguiſing the intereſt received under the names of *premiums for the riſk*, copartneries, &c.—devices, to which the conveniency of traders will give riſe, and which the laws will afterwards recogniſe and ſanction, as exceptions to the general rule.

Laws, in regard to the markets of grain, originating in mobbiſh inſtigation, have ſometimes fixed a *maximum* price, but never a *minimum*: In the ſame manner, laws, in regard to the uſe of money, have, in every country where they exiſt, ſhown an anxiety merely to fix a *maximum* rate of intereſt, and to brand all exceſs with the imputation of criminality; and probably, in almoſt every language, there is a term equivalent to the term *uſury*, and, like it, implying blame. It ſeems probable, that laws againſt uſury have generally been enacted, when legiſlators were either money-borrowers and ſpendthrifts, or idle beggars.

The legal rate of intereſt is different in every different nation; it has varied in every particular nation, at different periods: The criminality of uſury cannot then conſiſt in exacting five, ten, or twenty *per cent.* for the uſe of money; but in exacting more than the uſual rate of the market. In all optional tranſactions, the rate of intereſt might certainly be left to the diſcretion of parties, as well as the rate of any other marketable commodity: Nor does there appear

ay call for the ſtatutory conſtruction of fraud, *in the exac-*
n of more hire for the uſe of money than the market rate, into
ſpecific crime; more than in that *of exacting more than*
arket rate for the uſe of a horſe, or the day's labour of a man.
here ſeems even leſs neceſſity for legiſlative interference to
uard againſt impoſition in bargains about money, than in
argains about almoſt any other ſpecies of commodity: For,
hereas the quality of every other commodity may vary *ad*
finitum, under one and the ſame denomination; the deno-
inated money, ſpecified in the bargain, is always of an aſ-
rtained value at the time. The horſe I hire, or buy, may
e in any degree ſerviceable or unſerviceable; and the work-
an I hire, may perform a good or bad day's work; but the
umber of guineas or ſhillings, for the uſe of which I con-
act, muſt prove, upon delivery, exactly what I contracted
r.

Art may, no doubt, take advantage of ignorance and ſim-
licity, in exacting more than market value for the uſe of
oney, as well as in other things. There ſeems, however,
o aſſignable reaſon, why ſuch frauds might not be left to
e proſecuted at common law, as well as other frauds.

PART IV.

AGRICULTURAL INTELLIGENCE.

THE weather, during the two firſt months of the Summer quarter, was uncommonly dry; and apprehenſions were generally entertained that the growing crops would thereby be ſtinted and injured. The genial rains, which prevailed in July, have, however, in a great meaſure, removed theſe apprehenſions; and, if ſucceeded by ſunſhine and heat, there is great cauſe to hope, that, except upon the dry gravelly ſoils, a full average crop will be reaped.

The ſeverity of the drought curtailed the hay crop in ſeveral diſtricts, and rendered the paſture fields barren and unproductive. Hence, the prices of fat cattle and ſheep have continued very high; nor is there much room to believe that full markets will be procured for ſome time, as the uſual ſequence has been limited by the ſcarcity of lean ſtock, and the poverty of the paſtures. The greatneſs of the demand has occaſioned cattle to be ſlaughtered as faſt as they were ready for the knife; and perhaps leſs land is under graſs this year than ordinary, as the high price of grain occaſioned an extenſion of tillage in many places.

Few ſeaſons have permitted the naked fallows and turnip lands to be ſo well wrought as the preſent one; and the quantity of acres ſown with turnips is, perhaps, greater than hitherto known. The drought, however, has been unfriendly to the braird of this valuable plant upon the hard lands; and, except upon ſoft ſoils, the appearance is not very promiſing. Potatoes are this year greatly affected with the *curl*, which perhaps proceeds from the general ripeneſs of the root laſt year—no other cauſe can be ſatisfactorily aſſigned.

The grain markets have fluctuated much in the courſe of theſe months. In May and June, when large importations of American flour took place, a great declenſion was felt; but, of late, the riſe has been equally rapid, eſpecially in the article of wheat. Without theſe immenſe importations,

an abſolute famine would have prevailed; it being computed, upon good authority, that their extent, in wheat and flour, has been equal to one half of what the market could receive from the produce of laſt year's crop.

Notwithſtanding the perilous ſituation in which the country has ſtood, for the two paſt years, with regard to a ſupply of proviſions; and that the nation, in the courſe of twelve months, has been drained of ten millions of money, in purchaſing ſupplies, to make up for the deficiency of our own produce, it gives us pain to remark, that no effectual meaſure has been taken to prevent a repetition of ſuch calamities. It is obvious, that an extenſion of tillage is the only method by which they can be averted; and that this extenſion can only be accompliſhed, by bringing into cultivation a portion of the land preſently called *waſte*, which, in numerous inſtances, is capable of yielding the moſt prolific crops. Expectations were univerſally entertained, that ſome means or other would be uſed to remove the legal obſtacles which ſtand in the way of theſe lands being cultivated; but, we are ſorry to ſay, they are not realiſed. So far from that, the laudable endeavours of thoſe who promoted and recommended a melioration ſo beneficial, have been reprobated and ſtigmatiſed, and that by perſons without whoſe aid it is unneceſſary to expect it can be accompliſhed. In a word, not a ſhadow of hope remains, that any other ſyſtem will be adopted for bringing theſe lands into a cultivateable ſtate, than the tedious, expenſive, and complicated one practiſed ſince the days of William the Conqueror. Inſtead of cutting the Gordian knot by a ſingle ſtroke, we will fumble and work away in attempting to looſe it; and, according to calculations that have been made, it will take two centuries to accompliſh an object which might be attained by one ſimple enactment.

To what are we to aſcribe the averſion manifeſted againſt a general diviſion of the waſte lands? Does it proceed from a fear, that, by extending the breadth of cultivateable land, the value of the article, or that of the produce ariſing from it, will be leſſened? If this were really the caſe, our conduct would be ſomething ſimilar to that of the Dutch inhabitants of the Spice Iſlands, who are ſaid to burn their commodities, in order that the market may not be overſtocked. Or does it proceed from the apprehenſions of another claſs, that their revenues would be leſſened in conſequence of ſuch lands being exonerated from certain

burdens, to which the old cultivateable lands are generally liable? The increaſe of luxury and population will effectually prevent a depreciation of the value of old cultivateable land, allowing that every field in the kingdom was improved: and as for the intereſt of the other claſs, it does not appear how any injury could be ſuſtained by them, in conſequence of a diviſion; nay, rather, it is evident, that they would be benefited, in an extraordinary degree, by the portion ſet apart for their behoof, in the event of ſuch a meaſure being adopted.

We have not learned whether the Board of Agriculture have adjudged the ſeveral premiums offered for Eſſays "upon the beſt method of converting graſs land to tillage, and reſtoring it to graſs in an improved ſtate;" nor that any meaſure has been taken by them, in conſequence of the recommendation of the Committee of the Houſe of Lords, further than offering theſe premiums. We confeſs, we were not very ſanguine that much good would follow the recommendation, though it was undoubtedly well meant. Unleſs under the preſſure of difficulties like thoſe experienced for two years back, no temptation can be ſtrong enough to induce Engliſh proprietors to allow their graſs lands to be broke up, ſo long as the tithe ſyſtem continues upon its preſent footing. It is demonſtrable, that the extra tithe, which in that caſe would be payable, is nearly equal to the increaſed rent that would be drawn; therefore, however much the public would be benefited by ſuch a converſion, (and we confeſs the benefit would be immenſe), ſtill the individual proprietor would derive little advantage from breaking up theſe lands, ſeeing that the increaſed rent would chiefly be pocketed by a third perſon, while the land would be expoſed to waſte and deterioration in conſequence of the converſion.

Extracts from Original Communications.

SCOTLAND.

A Scotch gentleman, on a tour through the Weſt of England and Wales, writes to the Conductors, of date July 11, as follows:

"In an excurſion which I have made from Edinburgh, by Hawick, Carliſle, Lancaſter, Cheſter, Shrewſbury, &c. I have uniformly found that the wheat crop is excellent, and that oats, on all the mooriſh and damp ſoils, are alſo good, though they have generally failed on the gravelly and ſandy lands, in the ſame de-

gree as laſt year. Barley is but indifferent; few inſtances of a good crop: In Wales, it is beſt. Rye has all along been good. So few peas and beans are ſown in the tract through which I paſſed, that theſe grains are not worth mentioning. Very little artificial graſs is to be ſeen after paſſing Middleton, in Mid-Lothian; but the meadow hay is generally good. Turnips were pretty forward in the Scottiſh part of the tour, and in Cumberland and Weſtmoreland; farther ſouth, a few fields are only diſcernible, and theſe they are ſtill ſowing in the broad-caſt manner. Potatoes have abounded in the whole tract, particularly in Lancaſhire and Cheſhire; and, were it not for the almoſt univerſal practice of planting them in lazy beds, *as thick as a bed of onions*, from the great appearance of the foliage, a prodigious return might be expected. The *curl* prevails, leſs or more, among them, every where. Paſture graſs, owing to the vehement drought, has been burnt up on all the light lands; but, on moſſy and ſwampy ſoils, the appearance is excellent; and the *crop* of cheeſe is expected to turn out well. Fruit is this ſeaſon much better than laſt; yet they talk that it has failed farther ſouthward. With reſpect to the forwardneſs of the harveſt, you will be ſurpriſed to learn, that, except in Cumberland and Weſtmoreland, it will be later than in Mid-Lothian, particularly in the counties of Cheſter, Salop, and Montgomery, where they will be at leaſt a week behind us.—(*See farther Obſervations by the ſame gentleman, p.* 353.)

Extract of a Letter from a Gentleman in Dumfries-ſhire, 13th July.

"We had an agreeable ſeed-time: but, from the middle of April to the 1ſt of July, received little or no rain, which has injured our crops, eſpecially thoſe in the lower parts of Annandale, exceedingly. Three nights of froſt, viz. on the 10th, 11th, and 12th June, deſtroyed the braird of turnips, and blaſted the potatoes, particularly thoſe ſheltered by woods and hedges; in expoſed ſituations, they eſcaped, in conſequence of the wind preventing the hoar-froſt or *rime* from remaining upon them. We don't ſow much wheat; but what we have, looks to be good, as the ground, by being early covered, kept out the drought. We have a few oats ſtill in hand, which ſell from 6s. to 7s. 6d. per Wincheſter buſhel; but as for barley and wheat, none of theſe grains are, I believe, in the country, except in the hands of the manufacturers. It is a pleaſant circumſtance, that harveſt is ſo near at hand, that the country may meet with relief from the diſtreſs ſo ſeverely felt. I ſhall cut both barley and wheat by the end of the month, if the weather proves favourable; but

the recent rains, which have mended our proſpect in many reſpects, may probably retard that important piece of rural labour longer than we imagine.

"Great improvements are going forward upon Earl Manſfield's lands in *Lochar Moſs*, and I hope the ſucceſs will be equal to the vigour and ſpirit diſplayed in the ſeveral undertakings. I could wiſh to ſee a general ſpirit of improvement diſſeminated among our great people, as ſo much of the country might be improved with advantage, both to them and to the public. I notice, that Lord Carrington's bill for facilitating the diviſion of, and incloſing the waſte lands in England, is poſtponed; which will be a national loſs, as more money has been expended in purchaſing foreign corn, within theſe two years, than would be required to improve all the waſte lands of the kingdom."

Caithneſs Quarterly Report.

The weather during the months of April and May, being favourable, ſeed-work of all kinds was accompliſhed in a very perfect manner. In June, the weather continued alſo dry, which admitted complete juſtice being beſtowed in working the turnip land; and, within theſe eight days, we have had moſt ſeaſonable rains, which, it is truſted, will procure us an abundant crop.

Prices of grain declined a few weeks ago, but they have again advanced conſiderably. It is believed the advance will not continue, as the potatoe crop is at hand; upon which root the lower claſſes are chiefly ſupported. Hay is ſelling at 12d. and 14d. *per* ſtone from the tramp rick. Black cattle are higher than the oldeſt man living in this country remembers, and the demand very great; circumſtances much in favour of the Highland parts of the county; a great number of lean ſtock remaining on hand, when the advance took place.——*July* 11.

We have been favoured, by a friend, with the following extract of a letter from a gentleman in Ireland, dated *Fermy*, *27th June* 1801.

"There is certainly, in this country, an excellent field for agricultural improvement. The ſoil is in general better, and much more uniform, than in Scotland, being moſtly of a light nature, a great part of it upon limeſtone, and very eaſily worked; but then we want *ſecurity*. Under good management, excellent crops of all kinds are produced, as the ſoil is admirably adapted to the moiſtneſs of the climate. This is evinced by the greatneſs of the wheat crops upon the high grounds; and by the productiveneſs of the orchards, of which we have a conſiderable num-

ber in this neighbourhood. We have no ſuch things as clay or carſe ſoils. The diſpoſition of the proprietors in favour of reſpectable tenants, is conſpicuous, and no objections to long leaſes (ſay for 99 years, or for three lives and 31 years) are offered. The moſt reſpectable profeſſional people are thoſe upon ſtore farms; and, in the counties of Limerick and Tipperary, they are numerous. The inſecurity in this country, ariſes from diſpoſſeſſing the old tenantry, who will rather ſtarve as maſters, than live comfortably as ſervants; but, in ſome places, farms are to be had where this circumſtance does not operate; and, in ſuch ſituations, the ſpeculation generally turns out well. The ſervants here are much the ſame as with you, not the worſe of being looked after; but I find them apt enough to learn any thing, and I have three or four as good ploughmen as may be deſired."

Roxburghſhire Quarterly Report.

The crop was rather in a tickliſh ſituation of late; and it is difficult to ſay, to what extent it may be benefited by the rains which have lately fallen. The wheats look well, ſo does the barley. Oats, both early and late, are very ſhort; but, after all, promiſe a fair return *per* acre. Beans and peas ſet well. Potatoes have greatly recovered within theſe few weeks, and may be expected more prolific than they were in the two preceding years. Clover and rye-graſs, for hay, are but indifferent; but the meadow lands will yield a decent crop: of theſe, we have only a ſmall quantity. Turnips brairded partially; and upon the hard lands they have but lately appeared. If the turnip crop had been generally good, there is cauſe to believe, that ſtock to eat them would not have been procured, this county having been more drained of lean beaſts than at any time within our remembrance.

At *Yetholme* fair, lambs ſold at the enormous advance of eight and ten ſhillings above laſt year's prices. Black cattle, of all ages, and milch cows likewiſe ſell very high, and continue upon the advance. Prime beef is worth 8d. *per* lib., which is a ſure proof of a ſcarcity.

Long wool has been much wanted, and, of courſe, has been bought up at a conſiderable advance; the riſe upon ſhort wool is not ſo great. Few ſalmon have been caught this Summer in the Tweed, owing to the great drought, which rendered the river ſmaller than common; but ſince the rains, they are getting them in great quantities. We have little grain; and at Berwick, they are obliged to ſupply themſelves by importation, which is a very uncommon circumſtance.——*July* 17.

Dumfries Quarterly Report.

The corn market, ſince reaping the laſt crop, has varied conſiderably. Along the weſt ſide of the iſland, the crop appeared, and turned out better than an average: And farmers, unacquainted with the deficiency on the eaſt ſide of the country, began with ſelling very far below the prices of the preceding Summer. In October and November, oat meal ſold from 3s. 4d. to 4s. the ſtone—Barley did not exceed 7s. the buſhel, till Chriſtmas. From that time, it roſe till March; when oat meal was at 5s. 10d., and barley at 10s. 6d. From March till June, they fell gradually to 4s. 6d. the ſtone for meal, and 8s. the buſhel for barley; which ſeemed to be occaſioned by the good ſeaſon, and the battle of Copenhagen. In June, the drought, and particularly the froſts, raiſed the prices again; and they are now about 5s. for oat meal, 4s. for barley meal, and 8s. 6d. for barley. Wheat is not a general crop in Dumfrieſſhire, but is more ſo than it was a few years ago: It was very good laſt year, and the prices have been much about the rate of the Haddington market. Potatoes were generally a ſmall crop, particularly on light grounds. They were good in quality, and were kept up by the farmers at extreme prices. Through the Winter, and early part of the Spring, they were ſo high as 5s. the cwt. Very many, however, miſſed their market; and, in April and May, had to ſell as low as 3s. and 2s. 6d.

The preſent crop of all kinds ſeemed to offer extremely well till June, when the drought appeared to injure every thing upon light lands, particularly upon ſandy gravels; and more eſpecially thoſe along the coaſt, and in the lower parts of the county: while the ſtronger lands, in good order, were not materially affected. The froſts, in the nights of the 13th and 14th June, were pretty general, and gave a check to potatoes upon low and flat grounds. The moderate rains, which came in the beginning of this month, and ſtill continue, have revived the potatoes, and all other crops; and they are now as forward and promiſing, as they have been in the recollection of any perſon. Even the potatoes, which appeared to be injured by the froſt, have got the better in a great degree; and it is my own opinion, they will be a good crop, though ſome people think otherwiſe. Oats, from the good ſeed time, and kindly ſtate of the land, and the perfect quality of the ſeed, ſeem remarkably cloſe; and the early oats, which are generally of the Friezeland kind, are forward and regular. Common oats, which were late in ſowing, are leſs ſo. The new kind of oats, called *Potatoe oats*, which are not ſo forward as the early, nor ſo late as the common oats, ſeem alſo very abundant; and promiſe to be a great acquiſition, if they have not defects which are not yet obſerved. But

they were ſcarce known till laſt year, and the ſeaſon was ſo favourable in this part of the country, that nothing could be injured. The produce of them, laſt year, was from ten to twenty fold: and I have heard of much more. They are very generally ſown this year. In three months hence, you may be informed more particularly of their produce, and nature. Wheat appears a very abundant crop; and barley has not at any time looked better, or more forward. Nothing but wet and cold weather, in the two enſuing months, can, in all likelihood, prevent one of the earlieſt and moſt abundant harveſts that has been in the memory of man.

The price of live ſtock, of all kinds, ſet out high in the Spring, and has increaſed gradually till the preſent day. Cattle, particularly thoſe of age to be fed the preſent ſeaſon, are beyond the price of any former time. Sheep of all kinds are ſo alſo; but more particularly lambs, and year-olds. Wool markets, for this year's clip, are juſt opening; and conſidered to be at preſent about 10 *per cent.* above laſt year. *July* 17.

Aberdeenſhire Quarterly Report.

The laſt three months have preſented weather of various kinds; perhaps of more oppoſite tendency, than hitherto known in this county. Part of April and May were dry, with froſt in the night-time, which kept back the growth of graſs, and deſtroyed the bloſſom upon fruit trees and buſhes. The remainder of May, and firſt week of June, were moiſt and warm; but ſucceeded by 18 or 20 days of cold ſtormy winds, accompanied with flying ſhowers of half-melted ſnow. Since that time, we have had frequent rains, with a mild atmoſphere, which have mended the crops in a ſurpriſing degree.

Hay is a very light crop; and from the recent wetneſs, will hardly be got cured for the ſtack in tolerable order, but a fine fog may be expected. Barley is rather thin on the ground. Oats, which lately looked as if the fire had gone over them, are now recruited aſtoniſhingly. In reſpect of fodder, they cannot be conſidered in any manner as bulky; yet, as they are cloſe upon the ground, they promiſe to be rather more than an average crop. There never was a better ſeaſon for dreſſing turnip land, but the ſeed ſown had not moiſture to vegetate, till the rains came; which, of courſe, will render the crop late and precarious. Cattle of every deſcription have ſold at higher prices than remembered; and as the ſtock on hand, from the failure of laſt year's crop, is very limited, we have cauſe to believe, that the advanced rates will continue, till matters come round to their ordinary level. *July* 18.

Middle Ward of Lanarkſhire Quarterly Report.

The ſtormy weather in the month of March, mentioned in laſt report, was ſucceeded by a very favourable ſeed-time; which became general in this part of the country on the firſt week of April, and continued, with very little interruption, till the whole of the ſeed was depoſited in the earth. The greater part of the oat and bean ſeed being finiſhed in the courſe of two weeks, the continued dry weather afforded abundant opportunity for preparing the land intended for potatoes, which have been planted in very large quantities; perhaps, more than ever known in any former ſeaſon. Our clay land has ſeldom been known to be in better condition, or to yield more readily to the harrow; which has enabled it to reſiſt the long drought, much better than light land on a dry bottom.

The wheat crop looks well. Oats vary very much on account of the long drought, and appear to have little ſtraw on dry land. Barley is a light crop. Beans and peas look tolerably well. Hay in general is very light, and can ſcarcely be called above half an average crop. Potatoes are at preſent but middling, and are much ſtinted in growth, in conſequence of the ſevere froſt in the month of June; though they have ſuffered leſs *here* than in the Upper Ward of this country; the *curl* prevails in many places. Great hopes are entertained, that the late abundant rains will recover and improve the crop. Upon the whole, in ſo far as can be judged at preſent, there appears to be a fair average crop; and, as the extent of tillage far exceeds the uſual quantity, there is little doubt that the preſent crop will have the deſired effect to reduce the extravagant price of grain. *July* 18.

Extract of a Letter from a Young Gentleman, who lately viſited the Northern Counties.

We croſſed the Queensferry the 16th ult., and ſaw nothing worthy of obſervation, till we reached Stratherne. Crops there, in general, looked well. Wheat particularly ſo. Hay alſo ſeemed a very good crop. We next travelled down that rich corn diſtrict of the Carſe of Gowrie, from Perth to Dundee. One half of the Carſe ſeems under wheat, and promiſes vaſtly well: Although not very luxuriant, nor likely to lodge, yet it appeared ſufficiently abundant for a favourable after ſeaſon. Oats ſcarcely a middling crop. Little barley, and not good. Peas and beans moſtly broadcaſt, and very indifferent. That part of the county of Angus which we paſſed through, from Dundee to Montroſe, being uniformly dry gravelly ſoil, had ſuffered moſt ſeverely, even at this early period of the ſeaſon (the 19th June), by the drought. Crops, conſequently, which conſiſted chiefly of oats and barley,

much ſtinted. Hay crops very light, and paſtures very brown. From the continuation of the dry weather, and the ſituation of the crop of that part of Angus at the time we viewed it, all kinds of crops there muſt unavoidably turn out light. The ſeed ſeaſon, this year, having proved remarkably favourable for the Mearns, contraſted with Angus, their crops looked very well and freſh. I muſt not omit mentioning having ſeen ſome excellent fields of wheat in the neighbourhood of Montroſe; but with regard to other crops, they are very middling. Throughout Aberdeenſhire the crops looked very indifferent, till we got to the diſtrict of Buchan; where things appeared conſiderably better. The farmers there were complaining very much of the drought; but ſtill I don't think their crops were ſo far gone, but the late rains would be of material ſervice to them, and yield one apparently above an average. Superior cultivation exhibited ſome very good crops in Banffſhire. Murrayſhire, in general, was much hurt by the dry weather. Crops there, of every deſcription, looked very light; and, I am afraid, would prove irrecoverable. In the vicinity of Inverneſs, the land, conſiſting of the ſame dry ſoil, had ſhared the ſame fate. Saw ſome excellent crops of wheat in the neighbourhood of Cromarty. In Eaſt Roſs, the ſmall quantity of wheat we ſaw was excellent. Oats, in my opinion, would turn out, with the aſſiſtance of the late favourable rains, above an average crop. I cannot offer you my remarks on the turnip crop, as, all the way as we paſſed, till we got to Tarbetneſs, the moſt eaſterly point of Roſsſhire, the 3d of July, they were only finiſhing ſowing, and ſtruggling with the dry weather, to effect a braird. Returned by the Highlands to Stirling; Travelled down the Carſes of Stirling and Falkirk. Wheat and beans in theſe diſtricts are a moſt abundant crop; hay very good; oats but middling; and barley very indifferent. What ſtrikes me, as a general obſervation reſpecting the crops we have ſeen in our tour, is—wheat an excellent good crop, far above what I ſhould ſuppoſe an average; peas and beans bulky; hay conſiderably deficient; oats and barley will ſcarcely ſuſtain an average: and potatoes will certainly exceed it. Much attention ſeems to be beſtowed in cultivating this laſt and moſt uſeful plant; and the beautiful proſpect promiſes amply to repay ſuch requiſite induſtry.

Eaſt Lothian Quarterly Report.

Previous to the general rains, which prevailed from the 1ſt to the 18th July, the crop of this county, particularly upon the dry ſoils, was in a critical ſtate; and, with the exception of Winter ſown wheat, which had covered the ground, was fairly

at a ſtand. The full ſupply of moiſture lately received, has now occaſioned a remarkable change upon the face of the country; and, being ſucceeded by warm weather, gives us cauſe to expect an early and abundant harveſt.

Of all the grains, beans are worſt; being neither bulky, nor well podded: but the deficiency will likely be compenſated by the ſuperiority of the peas crop, which has a moſt flouriſhing appearance. Several farmers have, this year, ſown that variety of oats called the *Potatoe oat;* and the change promiſes to be attended with eminent advantage. This kind of oats is ſpreading faſt over all the ſouthern counties of Scotland, and threatens to ſupplant the Polands upon the fertile ſoils. Theſe laſt have, of late, degenerated; being ſmaller in the grain, and rougher in the huſk, than when originally introduced into this country, about eighteen years ago. We are ſorry to add, that, ſince the late rains, the appearance of mildew hath been diſcovered upon the wheat; but the extent of the evil cannot yet be aſcertained.

Though the hay crop turned out very poorly, yet the general appearance of a full ſupply of other fodder has occaſioned a depreſſion of prices, below what was expected. Paſture lands have hitherto been barren and unproductive; but they have now aſſumed an improved aſpect, and promiſe a full ſupply of Autumn graſs.

Prices of ſtock, both fat and lean, ſtill keep up; and, from general circumſtances, it is to be apprehended no declenſion will take place for a conſiderable time. A great extent of land was ſown with turnips and roota baga this year; but the ſeverity of the drought occaſioned an imperfect braird upon all the hard lands. Potatoes have but a middling ſhow; and curled ones are very numerous.

The grain market has varied much during the Quarter, eſpecially in the article of wheat; which, after a conſiderable fall, has again riſen nearly has high as mentioned in laſt Report. Oats are in few hands; but the demand is much leſſened, by the immenſe importations from England and foreign countries. The corn trade of the kingdom, for two years back, has ſet all experience at defiance; but in a few months, it is to be hoped that matters will return to ſomething like their ordinary level, when buſineſs will be conducted with ſteadineſs and preciſion.——*July* 20*th.*

Morayſhire Quarterly Report.

One of the fineſt ſeed ſeaſons ever recollected in this county, both for Winter and Spring grain, was ſucceeded by a tract of extreme dry and windy weather, which threatened deſtruction to crops of every deſcription; but, for the two bypaſt weeks, we have had abundance of rain; and the wheat, oats, peas, and beans, on rich land, are completely recovered, and, on this deſcription

of ſoil, will be a full average crop, while, in dry ſandy ſituations, both grain and fodder muſt be rather deficient. Hay is almoſt as ſcanty as laſt ſeaſon, but we have now ſufficiency of paſture graſs; and cattle of all deſcriptions have a briſk ſale, at enormous prices. Potatoe is a remarkable good crop; and a finer turnip ſeaſon was never known. Grain, which had fallen conſiderably, has of late become very ſcarce, at advanced prices. Beef and mutton, 6d. to 7d. *per* lb. Dutch. *20th July.*

Berwickſhire Report, from March 28th to July 21ſt, inclusive.

We had a long continuance of dry weather previous to the month of July, with a frequency of cold winds at north and eaſt, which rendered vegetation very ſlow. Towards the middle of June, the hoar-froſts were ſo ſtrong, as to damage early potatoes, and blaſt the young ſhoots upon thorn hedges that had a northerly expoſure. The paſtures upon dry gravelly ſoils were quite brown by the end of the month; while barley and oats, in ſimilar ſituations, began to ſhow the ear, though ſcarcely ſo high as rank ſtubble.

The rains which commenced with July, have given a freſh verdure to the ſun-burnt graſs, and made grain of all kinds ſhoot away vigorouſly; but the crop was ſo far advanced before they ſet in, as to preclude the hope of ſeeing a full weight of ſtraw upon the ground this ſeaſon.

Hay harveſt would have been pretty well advanced, had it not been retarded by the wet weather, which will, however, prove favourable to the growth of aftermath. The crop turns out very light, and univerſally deficient in clover. It has been ſelling, from the rick, at 1s. *per* ſtone of 22½ lib. Engliſh.

Several fields were ſown with turnip about the end of May, and in general made a good braird. Thoſe ſown towards the middle of June (particularly where the ſoil contained any mixture of clay) did not vegetate ſo equally. The blanks have indeed filled up ſince the rains, but make little progreſs in growing: the ſeeds, however, that ſprung immediately after ſowing, and all the early fields, are in ſuch a thriving ſtate, as to promiſe an abundant crop.

The wheat crop has every where a luxuriant appearance. Barley, particularly where it was early ſown, wears alſo a promiſing aſpect, though it will, in ſome caſes, be deficient in length of ſtraw. Oats, in general, promiſe to be a fine crop, though, like the barley, they will, in many caſes, be ſhort in the ſtraw. Beans are every where looking well, and peas are very luxuriant; but, excepting fields that were ſown with Engliſh ſeed, they, for the moſt part, bloſſomed late. The potatoe crop never wore a more promiſing appearance, being generally luxuriant, and very little

infected by the curl; and the dry weather having admitted of complete juſtice being done to the turnip and naked fallows, the latter are, in general, in a high ſtate of preparation.

Clover ſeeds made a fine braird, and do not appear to have ſuffered from the drought, as they did laſt year.

There having been a continued demand for ſtock to the Engliſh paſtures all this ſeaſon, prices have, in conſequence, been high. Year old ſheep (provincially hogs) were from 3s. to 4s. a head above laſt year, and other ſheep in proportion. At Dunſe June fair, lean cattle ſold extravagantly high, and have continued ſo, with little variation, at all the recent markets.

Wool, in general, did not turn off much above laſt year's weight, but has experienced an advance in price, equal to 18 or 20 *per cent.*

Inverneſsſhire Quarterly Report.

Since the month of March to the 8th inſtant, we had no rain worth mentioning; and, of courſe, our crop ſuffered exceedingly. Both corn and graſs, in many places, were quite withered; but a wonderful change has taken place upon them, ſince the late rains. Wheat, barley, and peas, promiſe to yield an average crop. Oats are but light; ſo is hay: but the fog looks remarkably well. Potatoes got a ſevere check from a hoar-froſt, on the 16th June, but are now much recovered. Turnips are thriving, and chiefly out of danger. Our preſent proſpects are certainly favourable, though much depends upon the after ſeaſon.

Owing to the great demand, and extraordinary high prices that have been given all this ſeaſon for black cattle, I imagine the Highlands of Scotland were never ſo completely drained of lean ſtock. Beef and mutton ſell from 5d. to 7d. per lib.; and all other neceſſaries of life equally dear.——21*ſt July.*

Perthſhire Quarterly Report.

During the whole month of May, vegetation made a moſt rapid progreſs; and the grain crops appeared very luxuriant in many places. The drought in June, however, completely checked this exuberant vegetation, and changed the fine lively green, which decorated our fields, into a ſickly and pale hue, much the ſame as what they exhibited laſt year. Happily for us, July brought abundance of moiſture, and reſtored decayed vegetation to its former vigorous ſtate. The wheats are very forward, though, in ſome fields, a little *ſmut* is diſcernible, which I attribute to want of care in pickling.

The early ſown barleys are for the moſt part good; but thoſe later ſown are inferior. Oats are cloſe in the ground; but, from

the check received in June, will not be bulky. The hay crop is light, and its colour hurt by the rain, although the quality is not much injured. It is now selling from 8d. to 10d. per ſtone from the rick.

Potatoes, this ſeaſon, are much affected by the curl, which muſt leſſen their product conſiderably. The cauſe of the diſeaſe is variouſly accounted for; but, as the ſubject deſerves attention, I ſhould wiſh very much to hear the opinion of ſome of your friends upon it. The drought was much againſt the turnips, and, in many places, the firſt ſowing almoſt totally failed: later ſowings are likely to do better; but on the whole, it is apprehended they will not be a good crop this ſeaſon.——23*d July.*

Extract of a Letter from Glaſgow, July 23d.

'Our crop was much hurt by the ſevere drought in the beginning of Summer; but the late rains have produced an extraordinary change on the fields. Wheat, we think, is as great a crop as we remember to have ſeen in this part of the country. Barley, at one period, was thought almoſt uſeleſs, but, ſince the rains and the warm weather, has greatly improven. Oats, upon the light lands, were almoſt burnt up, but are now wonderfully revived. Beans and peas are ſhort in the ſtraw, but well podded. Hay is far ſhort of an ordinary crop; but the deficiency will be, in part, made up, by the augmentation of fodder which will now be gained. Potatoes look amazingly well; and, from the great quantity planted, we may expect a ſeaſonable relief from them in a ſhort time.

We have had an extraordinary importation of Indian corn, Indian corn meal, rye, and wheat flour, from America; which have had the effect of keeping our markets lower than in any other part of the kingdom. Our preſent prices are—American wheat, 62s. and 63s. per 240 lib.; Dantzic do. 58s. and 60s. per boll; Britiſh do. 50s. to 60s.; Barley, 40s. to 42s.; Oats, 28s. to 38s.; Peas and Beans 34s. to 42s.; American wheat flower in barrels, 56s. to 64s. per 196 lib.; Rye do. 40s. to 42s. per do.; Indian corn meal, 33s. to 34s. per do.; old hay, 1s. 4d. to 1s. 6d. per ſtone, tron; new do, 1s. to 1s. 2d. per do.; beef 10d. to 1s. per lib. do.'

Obſervations by a Scots Gentleman, who lately made a Tour in England, continued from p. 343.

Having, in a former communication, related my obſervations on the ſtate of the preſent crop, in an excurſion to the ſouthward, I ſhall endeavour, in a few words to deſcribe it, as it appeared to me on my return home by a different route, from the 15th to the 25th of July incluſive, in a tract from the interior of the

county of Cardigan by Aberyſtwith, Machyntleth, Dolgelly, Bala, Corwen, Wrexham, and Holt, in Wales; from thence, by Tarporley, in Cheſhire, to Warrington; and then through Lancaſhire, by Mancheſter, Rochdale, and Colne; and through Yorkſhire, by Skipton, Ripley, Ripon, and Northallerton; and ſo on, by the eaſter poſt road, through Darlington, Durham, Newcaſtle, &c. by Berwick, to Edinburgh; a courſe of about 380 miles.

The wheat and rye (Autumn ſown crops) are good every where; but the Spring corn, barley, oats, and peas, are partly good, partly indifferent, and ſome bad, according as the ſoil was more or leſs able to endure the ſeverity of the drought in the beginning of Summer. The ſame obſervation applies to the paſtures; but the hay crop is good or bad, in proportion to its ſtate of forwardneſs; that which was cut down before the rains in the beginning of July, being very defective; whilſt thoſe fields which were ſtill remaining for the ſcythe, and which is by much the greater proportion, have recovered greatly, and are turning out well. The turnip will all be good, ſo far as depends on the weather; but will vary according to management: not many, at any rate, in the Engliſh part of this route: The beſt were about Ripon, and in broad-caſt, as every where elſe; but much inferior to thoſe in Eaſt-Lothian, which are cultivated more judiciouſly in drills. The beſt paſtures were in the Vale of Skipton; ſuperior, indeed, to any I have before or ſince ſeen: the worſt were in the county of Durham, ſouthern part of Northumberland, and eaſtern coaſt of Eaſt-Lothian; all owing to the influence of the drought in the early part of the ſeaſon. The beſt tract for good crops of all kinds, was in Northumberland, between Charlton and Haggerſtone; an extent of about 15 miles, where every thing was excellent, particularly barley and peas.

The harveſt does not ſeem to be very forward any where, except about Aberyſtwith, where ſome fields of wheat and barley muſt be cut down by this time. A few fields about Linton, in Eaſt-Lothian, will alſo be ready in ten or twelve days; but every where elſe in the above route, the crop is fully as late as about Edinburgh; and it muſt yet be three or four weeks before harveſt is general: In the high country, on the confines of Yorkſhire with Lancaſhire, it muſt be much later, as the corn there is yet hardly come into ear. Potatoes abound in every place; and, notwithſtanding of the *curl*, which affects them all, they have a promiſing appearance, and are alſo very generally begun to be taken up. Between Warrington, and Mancheſter, many fields of them are entirely cleared, and a new crop planted with potatoes again, or ſown with ſome other crop.

Vicinity of Edinburgh,
July 28th 1801.

ENGLAND.

Norfolk Quarterly Report.

The ſoil of Norfolk is ſo various, that it is extremely difficult to give ſuch a clear and correct account of the crops as could be wiſhed; but, in general, the wheat crop may be ſtated as not exceeding two-thirds of an average one. Some of the very early barleys are good; but the late ſown fields ſuffered exceedingly from the drought, and cannot now be weighty, under the moſt favourable circumſtances. Oats and beans are alſo good; but peas are indifferent. We have had heavy rains of late, which, it is hoped, may help the corn crops, and came very opportunely for the turnips, which are now conſidered to be out of danger. Very little grain at market. Superfine wheat is worth 160s. *per* quarter;—general runs 120s. to 126s. Barley 36s. to 46s.; fine ditto 70s. Oats 32s. to 40s.; ſuperfine 44s. *July 17th.*

Yorkſhire Quarterly Report.

During the laſt two weeks, the weather has proved very unfavourable for the hay crop; little of which hereabouts has been ſecured, though the cutting is conſiderably advanced: much is ſpoiled, and ſpoiling. The produce of graſs is perhaps, on the whole, above an average one: That of red clover very thin and light in general. Flax and rape are good; but the rain is againſt them at preſent:—a circumſtance conducive to the proſperous ſtate of growing ſeeds of all ſorts.

The paſtures have been, and ſtill are in a luxuriant ſtate; but a continuance of the wet weather will ſhortly affect them on the colder ſoils, requiring more ſunbeams than have of late fallen to their lot. It is remarked, that cattle have hitherto fattened and milked on graſs better than uſual, during the Spring and Summer months; yet, without reduction of the price of their products.

The preſent appearance of the crops of grain promiſes abundance: the late rains have already produced a ſenſible improvement in thoſe of beans, oats, &c. which, on ſome ſoils, were hard pinched by the preceding drought. The wheats afford a proſpect of one of the fineſt crops ever reaped in this county; though ſome of all ſorts begin to be lodged too early. Theſe unequivocal ſymptoms of future plenty, as in the caſe of graſs products, have at preſent no effect in lowering the price of grain, which ſeems advancing, particularly that of wheat.

The growing potatoes, on the whole, promiſe remarkably well: ſome appeared injured by the Summer frosts, but are now

recruited and growing vigorouſly. Great quantities of this uſeful root have been planted; and, if we may judge from the excellent quality of the early ſorts already in uſe, we may reaſonably expect a bountiful ſupply of a good article of its kind. The early ſown turnips had begun to diſappear; but the late rains have made them aſſume the moſt promiſing appearance: and, from the unuſually fine fallowing ſeaſon, and the general excellence of the tillage, a full crop may be almoſt preſumed upon. Some turnips are hoed; but that operation has been much retarded by the rain.

Cattle and ſheep are ſtill dear. Beef and mutton about 8d. *per* lb. Veal 7d. *per* lb. avoirdupois. Good horſes are in great demand, and ſell at advanced prices. Wool is above the higheſt pitch ever known. *July 17th.*

Extract of a Letter from Stafford, July 18.

'Our crop promiſes an abundant return, but I am apprehenſive, that the late heavy rains may do injury upon the low grounds: they have, at leaſt, greatly impeded our hay harveſt, and much of our meadow graſs ſtands a chance of being entirely ſpoiled, if a favourable change does not ſoon take place. Our markets keep high, both for grain and butcher-meat. Beef is 8d. and 9d. *per* lb.; and bacon at the enormous price of 14d. *per* lb. by the whole flitch. Store pigs are prodigiouſly ſcarce, and ſell from one to two guineas. Cheeſe from 77s. to 80s. *per* cwt. My vetches are, this year, exceedingly fine; and, from experience, I can ſay, they are the profitableſt of all crops, being both food and phyſic for any kind of cattle, particularly horſes, who eat them with great avidity. I have ſeveral acres of the Swediſh turnip, which promiſe well. Potatoes are good; and ſuch an extent was never known to be planted with them, as this year, which I hope will make them cheap. I was lately in London, and was highly delighted with the many new agricultural inſtruments, which I ſaw at the warehouſes of the ingenious mechanics of that Metropolis. Meſſrs. Turbat and Tunſtal, Clement's Lane, Temple-bar, have invented a curious portable thraſhing machine, for which a patent is obtained; and I was informed, that a man and a boy, with it, are capable of thraſhing 50 buſhels *per* day. I ordered a machine for hoeing turnips, from Mr. Stevenſon, No. 79, Margaret-Street, Cavendiſh-Square, which anſwers ſeveral other purpoſes. The great evil we lie under, in our part of the country, is the obſtinacy of our ſervants, who, from their infancy, imbibe ſo many vulgar notions againſt improvement, that it is impoſſible to put theſe new inſtruments into their hands, unleſs you want to have them deſtroyed. The Reverend Mr. Cloſe of Norfolk, finding it in vain to attempt accompliſhing his improved plans with the old ſervants,

actually employed his bailiff to inſtruct ſix young men in the uſe of the new inſtruments; for which he obtained a medal from the Bath Society.'

Extract of a Letter from a Farmer in Wales, July 14.

'Since I wrote you in March, we have, upon the whole, had a continuance of favourable weather; which, I truſt, will be followed with beneficial conſequences. Our early cut hay is a light crop, but was got in good condition; and the ſhowery weather, which we have had for a fortnight paſt, has much improved the late crops, and ſaved both our potatoes and turnips. Corn, of all kinds, is looking well, particularly upon the clay ſoils; and the wheat, which had a fine blooming time, is now beginning to change colour, and ſeems remarkably well filled. There is leſs barley ſown than uſual, as we have a greater breadth of wheat, but it looks very beautiful. Oats are good: ſo are peas and beans; and if good weather continues three weeks longer, we will, to all appearance, have a harveſt of plenty, both to man and beaſt. We have ſtill a great demand for cattle, and every fair is crowded with purchaſers; of courſe, the price is high. Cows and calves are particularly dear; and ſo are ſtore pigs. We have little or no corn of our own at market; but our principal ſupply, during the Summer, has been by importations of barley, at Cardiff and Swanſea, of a very inferior quality, though it ſells at 10s. or 11s. *per* Wincheſter buſhel.'

Northumberland Quarterly Report.

The months of April and May, being mild and dry, were very favourable for vegetation; and the corn crops on rich land, had once the appearance of being too luxuriant, but the drought continuing through June, has prevented their lodging; and, upon ſandy dry lands, very much injured the crops of both graſs and corn; but a fine rain on the 1ſt July, effectually ſaved the crops on other ſoils. From this period to the 17th July, we had a ſeries of wet weather, with ſcarcely a fair day; by which the hay, that was unluckily cut at the time, is materially damaged: As the laſt three or four days have been very fine, I hope the remainder will be ſaved.

The corn crops are, in general, looking well, particularly the wheat; and if we have a continuance of dry weather, and a good harveſt, I hope this year will prove a year of as great abundance as the two laſt were of ſcarcity.

The dry weather in May and June proved very favourable for working the turnip fallows. On many ſoils, the turnip ſeeds did not vegetate, for want of moiſture; but the abundant rain has

now brought them all forward; and, if we have a ſucceſſion of warm weather, they have every appearance of being a full crop.

The potatoes were much injured by a ſevere froſt on the 13th June, which killed all the tops, and checked their growth conſiderably; they have ſince ſent out numerous freſh ſtems, and are now looking very healthy. This froſt was ſo ſevere, as to kill the leaves on young aſhes. Fruit of all kinds alſo ſuffered. Gooſeberries, in particular, are the worſt crop ever remembered.

The crops of clover hay were very light, and ſold in ſome parts of the county for 5l. a ton. The crops on the old meadows, yet uncut, will be weighty, and probably make up the deficiency of the other.

The prices for both fat and lean ſtock, ſtill continue very high. Beef, 8s. *per* ſtone, ſink. Mutton, 9d. *per* lb., ſink. Long-wooled lambs for keeping, were ſold at Yetholme fair at 21l. *per* ſcore; and Highland lambs, from 10l. to 14l.; which is ſeveral ſhillings a head more than they were ever ſold at before.

Wool has alſo been ſold at very advanced prices; parcels of long wool, which were ſold laſt year for 10d. *per* lb. have been ſold this year for one ſhilling. *July 20th.*

Lincolnſhire Quarterly Report.

The corn crops in this county are, upon the whole, as good as I recollect to have ſeen them for many years; and, as a great breadth of potatoe land was planted, we have reaſon to hope that a conſiderable reduction will ſoon take place in all our markets, though they ſtill continue very high. Sheep have ſold at extraordinary prices all this ſeaſon: thoſe once clipped, called *ſhearling wedders*, from 60s. to 80s. *per* head, and lamb hogs from 40s. to 60s. The wool market is alſo advanced; the general price being from 28s. to 31s. *per* tod of 28 lb. Horſes have likewiſe ſold high; as alſo, horned cattle, which have been bought by our graziers, for feeding on the marſhes, at exorbitant rates.

That reſpectable gentleman, the Right Honourable Sir Joſeph Banks, Bart., after various obſtacles thrown in the way by the clergy and tythe owners, obtained three acts of Parliament for reclaiming and improving our fens: *1ſt*, For effectually draining the three *fens*, and adjacent country: *2d*, For incloſing Wildmore fen, about 11,000 acres: *3d*, For incloſing the eaſt and weſt fens, about 19,000 acres. When theſe improvements are accompliſhed, the benefits to the individuals, and to the public, muſt be conſiderable.

Some complaints are made, that the wheat and barley crops are injured by the grub-worm, but I do not think the injury general. Since the late rains, our meadows promiſe to yield a full crop of hay. *20th July.*

Extract of a Letter from London, July 20th.

'In Middleſex, the beans and wheat (the chief crops) are very fine; but, in ſome places, laid down by the rains. Several fields of the latter will be ready in the courſe of ten days. Both wheat and barley have a fine appearance in Hertfordſhire; as alſo the turnips. Eſſex bids equally fair for a great crop; of which a conſiderable proportion is wheat. The county of Kent is alſo in a flouriſhing ſtate; and, in the article of hops, the ſhew is very favourable.

For three weeks paſt, we have had frequent ſhowers, which retarded the hay harveſt, and advanced the price full 12s. *per* ton. Dry weather ſeems to be again ſet in; which will enable the hay farmers to get in their crops. Before the rains arrived, the barley upon the light ſoils, was feeling the effects of the drought very ſeverely.

The price of wheat has been upon the riſe ever ſince the end of May, notwithſtanding the great importation of foreign wheat, and wheaten flour, from America. Had it not been for the American importations, the city of London would have been ſcantily ſupplied with fine flour; as the quantity of Engliſh wheat at market was comparatively ſmall, and the greateſt part of the foreign was not fit to grind without a mixture. This day, a larger ſupply of Engliſh wheat has appeared at market than has been produced for ſome weeks paſt, which had but a dull ſale, and at reduced prices. Oats were alſo a little lower. Beans, peaſe, and barley experienced little alteration. Current prices at Mark lane—Wheat, foreign, from 105s. to 160s.; Kent and Eſſex, 164s.; rye, 56s. to 63s.; oats, 28s. to 44s.; barley, 34s. to 65s.; beans, 46s. to 53s.; peaſe, 53s. to 56s.; all *per* quarter of 8 Wincheſter buſhels. New potatoes ſell from 7s. to 8s. *per* cwt.

Smithfield market is well ſupplied; and vegetables of all kinds are both plentiful and cheap. Retail prices of butcher-meat are —Beef and mutton, 8d. to 9d.; lamb, 9d.; veal, 6d. to 9d.; and pork, 12d. *per* lb. New hay, 5l. *per* load; old do. 6l. 10s. to 6l. 15s. Wheat ſtraw, 2l. 6s. to 3l. Fine Kent hops, 10l. to 11l. 10s. *per* cwt.'

Extract of a Letter from a Gentleman in the North-Weſt Corner of Northumberland.

'The N. W. corner of Northumberland, from its mountainous and moſſy nature, is moſtly occupied in the ſheep huſbandry; and thoſe kept, are of the Cheviot breed. The laſt Winter and Spring have been remarkably mild; and well grown fleeces, and great crops of lambs are the conſequence.

From the great loſſes ſuſtained among the ſheep and lambs in the three preceding years, along the Borders, the ſtock farmers have not been able to caſt above one-third of their uſual quantity; and, owing to the very great demand from Yorkſhire, and the more ſouthern counties, (partly occaſioned by the expected riſe on the price of wool), rough ſheep have advanced in price; and, at Stagſhawbank fair, on the 4th July, were on an average, one-fourth more money than laſt year; black cattle equally high. Salved wool (what is yet ſold) brings from 1s. to 1s. 4d. *per* pound; but more is expected for the beſt parcels. Wedder lambs, of a good kind, are ſelling from 10s. to 12s. and 13s. *per* head.

The graſs and corn here, and down the banks of the Tyne, to Newcaſtle, look remarkably well; but the potatoes were ſeverely checked, by the froſty nights we had in June: However, they now vegetate afreſh ſtrongly, and promiſe to be a tolerable crop, but will be much later than common; to the great diſappointment of the poor, who had planted large quantities of the early kind, from which they expected the firſt relief from their preſſing wants. The fallows, in this quarter, have wrought very clean, but dried much in the operation, which made a very partial braird of the early ſown turnips: however, where the ſeed was known to be good, and people had patience, the late rains have cauſed (after lying a month in the ground) a fine braird, and the appearance is now very promiſing.'

Extract of a Letter from an Engliſh Gentleman, of great experience in Practical Huſbandry, who viſited Scotland this Summer; dated Birmingham, July 24th.

'I am now got this length homeward, where I will be ſtationary for a few days; and ſhall employ a leiſure hour in communicating to you a few obſervations which occurred during our progreſs.—At Edinburgh, I met with Sir John Sinclair, Baronet, who kindly wiſhed me to take a trip to Caithneſs, or, at leaſt, to the Carſe of Gowrie: And, though I did not intend to extend my tour father northward, yet, as a ſmall thread will lead us, when our inclinations are in uniſon, I went to Mr. W———'s in the Carſe; and did not repent having undertaken the journey. The huſbandry of that diſtrict charmed me; indeed, through Northumberland, and all the way through Scotland, to Perthſhire, I was highly gratified: but there I muſt ſtop; for, from Perth, acroſs the country, to Dumfries, and through the weſtern diſtricts of England, to this place, the general management is very much according to the old ſchool, though there are numerous inſtances of ſuperior practice every where diſcernible. One circumſtance ſtruck me forcibly; that was the

ty of ſtock. How is this to be accounted for? Not by the :aſed quantity of *herbage*, ſurely: Or how can the great ity of *grain* be ſaid to ariſe from the increaſed quantity of -land?

he crops appeared every where abundant in the diſtricts we d through, but far from being forward. We were often 'You will ſee barley cut at the next ſtage.' But it was all ion; for, to this place, we have not ſeen a field that will be y for the ſickle in leſs than ten days, or a fortnight. The rop appeared very abundant; yet, at Liverpool, when we there, grain felt a conſiderable advance. I am informed, our crops in Dorſetſhire are good, and that turnips and po- s are excellent. If theſe united circumſtances do not reduce s, (and, after all, I am inclined to think the reduction will e equal to many peoples expectations), we muſt look for a elſewhere. Our growth is not adequate to our conſump- ; which has long been my opinion. How is this to be rec- ? Pray, let your next communication be on that ſubject; h will oblige,' &c.

POSTSCRIPT TO SCOTTISH INTELLIGENCE.

-Lothian Quarterly Report, from April 5th, to July 30th, inclusive.

om the long and intenſe drought, which prevailed during the le months of May and June, there was much reaſon to ap- end, that the crop would not turn out near ſo well as was noſticated from the indications of the preceding quarter; pring-ſown grain of every deſcription, as well as the paſ- and hay fields, were much affected, and ſuffered greatly. pily for the country, the fears entertained on this ſubject, been diſſipated. Seaſonable and refreſhing ſhowers, with h warmth, through the greater part of the month of July, recovered the crop ſo far, as to give room for the moſt ſan- e hope, that *the years wherein we have ſeen evil*, are at an and that plenty will again ſmile upon the land. The hay only has miſſed of this favourable return in the weather, as of it was cut down before the rains came; and the pota- alſo, from the uncommon prevalence of the *curl*, can hard- expected to amount to an average return: But every other of crop has, at preſent, the appearance of being abundant, can hardly fail to be ſo, but from too much rain, ſhould ſuch nhappy occurrence take place in the remaining weeks of the

ſeaſon. Harveſt, it is ſuppoſed, will be pretty generally begun, in the vicinity of Edinburgh, by the 20th of Auguſt.

Notes to Correspondents.

A very valuable communication on the folding of ſheep, accompanied with a polite letter from Sir John Sinclair, was unfortunately too late to be inſerted in this Number; but will have that attention paid it in the next, to which the reſpectability of the author, and the importance of the ſubject, ſo juſtly entitle it.

A very ſenſible paper, on the uſe of lime, ſigned *P.* is unavoidably delayed till next Number, for want of room; as are alſo the papers ſigned "*Ruſticus junior—B.—A. B.—A. M.*" and many others, containing much valuable matter; all of which will be duly conſidered, and have every poſſible attention paid them.

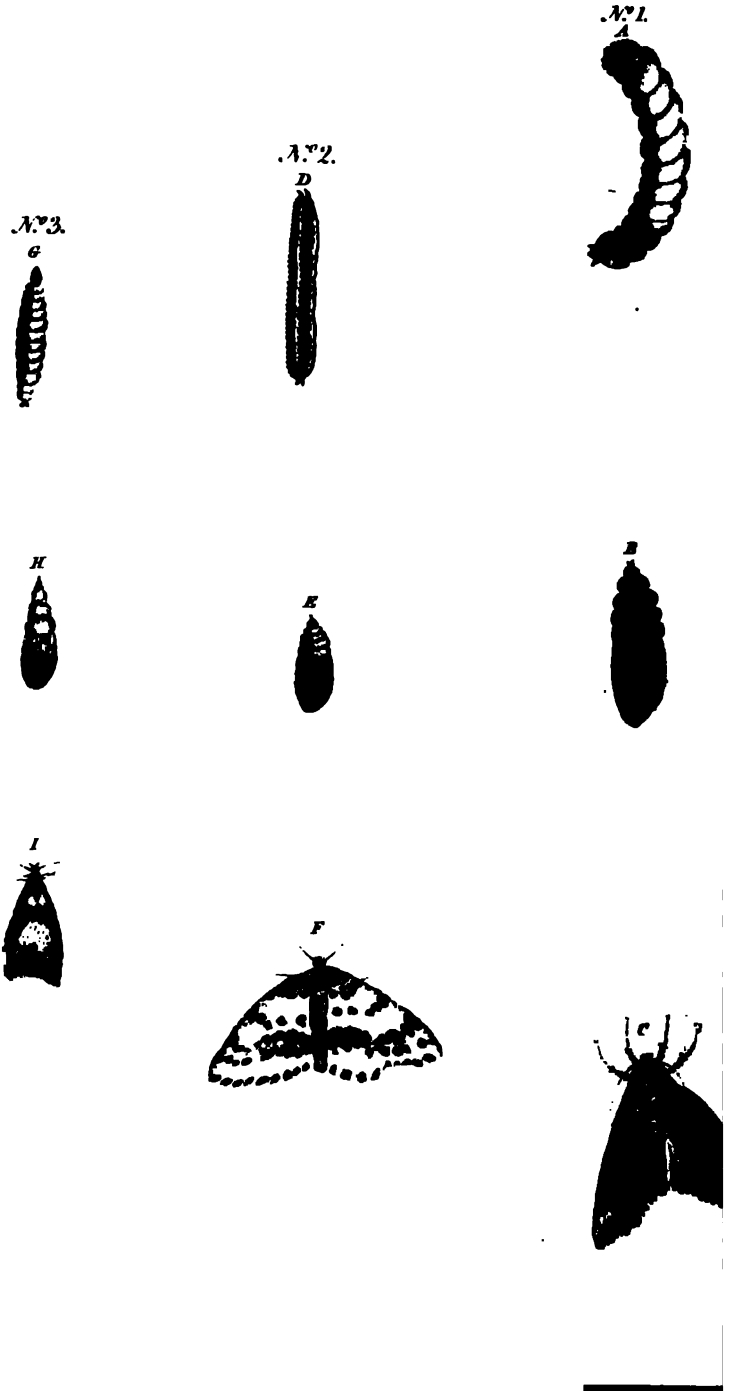
An intelligent paper, concerning the *grub worm*, read to the *Holderneſs Agricultural Society*, has been received, and will be noticed in a future Number.

In our next, will be given copious extracts from an Eſſay, tranſmitted to the Board of Agriculture, on "*the beſt means of converting graſs land to tillage, without exhauſting the ſoil, and of returning the ſame to graſs in an improved ſtate, or at leaſt without injury.*" Colonel Fullarton's Pamphlet on that important ſubject, could not be overtaken in this Number, but will be reviewed afterwards.

Reviews of the *Norfolk*, *Suffolk*, and *Mid-Lothian Surveys*, are in hand.

Materials are wanted for completing a Memoir of the celebrated John Cockburn, *Eſq. of Ormiſton*. Information relative to the improvements introduced by him, will be gratefully received.

Several *Quarterly Reports* were received too late. It is again requeſted that the gentlemen, who kindly favour us with intelligence, will tranſmit the ſame, at leaſt ten days before the day of publication.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THE

FARMER'S MAGAZINE

MONDAY, 2. NOVEMBER 1801.

(N°. VIII.)

PART I.

ORIGINAL COMMUNICATIONS.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Observations on the Different Kinds of Grubs and Caterpillar

GENTLEMEN,

IN the 4th Number of your Magazine, I observe an engra ing, together with a very accurate account, of a Grub, su posed to have occasioned the failure of the oat crop last yea Having paid some attention to the same subject for sever years past, I present you with my observations; which, they are the result of experience, may not be unacceptable some of your readers.

The Grub represented in No. 4th, is met with in w situations every year, in greater or smaller numbers, in pr portion to the heat or cold of the preceding season. Whi the insect remains in the egg state, no inclemency of weath can hurt it; a fact, of which last year affords a convincin proof; for, notwithstanding the severity of Winter 179 and the coldness and inclemency of the following Sprin immense numbers were produced, which, by their ravag upon the oat crop, contributed not a little to increase the pu blic distress. While in the grub state, it is likewise invu nerable; and the fly produced, is equally hardy. The onl stage of its existence, in which it appears susceptible of in jury, is, in passing from the grub to the aurelia state, whe

rains and cold weather are fatal to it; and as, in ordinary years, that change takes place about the end of May, or beginning of June, a period at which rain commonly falls in considerable quantity, nearly the whole race perish every year, except such as have taken up their residence in the soft dry molehills that are met with in meadows, or in the sides of ditches; for, upon all the arable lands, I believe very few remain to propagate the species, unless in seasons when the weather is uncommonly dry during the whole of the period they remain in the aurelia state, as was the case in 1798. A part of May, and the whole of June, passed over with very little rain; in that way, a great proportion of the eggs, deposited in the arable lands, survived, and became grubs.

In tracing the history of an insect so very destructive, and which, were every season alike favourable to its production, would soon render the world a desart, we are struck with the circumstance of its being so readily destroyed by moisture, at a time when the rains, to it so fatal, are so highly necessary and useful to the crops.

This grub, however, is not the only one by which the crops are injured. There are several others, pretty numerous, and equally destructive, produced in dry soils, and in all seasons: these, like that already noticed, resist every injury of the weather throughout the year, and in every stage of their existence, except when they are in the aurelia state, when cold and moist weather kills them. The whole of the grubs bred upon dry lands, are of the moth tribe. In the drawing by which this is accompanied, No. 1. represents one of the most destructive of these, in three different stages of its existence:

A, the Grub,
B, the Aurelia, and
C, the Moth.

The grub comes into existence, if the Autumn has been very warm, about the end of October, and continues to increase in size, as long as any tolerable degree of vegetation is going on; after which, owing evidently to the want of food, it remains stationary till the following Spring; at an early period of which, its depredations are observed. About the end of February, it begins to grow, and continues increasing in size till the beginning of May, when it is upwards of an inch in length, and about one third of an inch in circumference. It is then exceedingly destructive, and cuts through the roots of the

the strongest stalks of grain in a very short time. I this year took one of them, and put it into the earth, which consisted of soft black loam, at the root of a plant of oats that had sent out thirty-seven offsets, and had been well earthed up. The grub was put in about mid-day, and well covered up. The plant was examined next day, about the same hour; when the leaves were found hanging down, seemingly in a dying state. Upon looking at the root, I found not only the main stem, but the whole of the offsets, so much injured, that there appeared little hopes of their recovery. Accordingly, in a few days thereafter, they were all dead.

In seasons when they are numerous, the mischief they occasion is certainly very great: fortunately, however, nearly the whole race perish every year; and the stock is kept up from the eggs, deposited in the sides of ditches, in plantations, and amongst coarse-fogged herbage, which preserve the aurelia from being injured by moisture.

In describing an insect so very destructive, it would afford me great satisfaction to be able to point out a remedy for the evil: of that, however, I confess myself in a great measure ignorant. Lime, in the act of slacking, is certainly fatal, not only to the grub, but to insects of every description, which come within the reach of its influence. But, though it is thus baneful in a hot active state, (a circumstance that well deserves the attention of all farmers), I do not find it equally so after it has re-absorbed a proportion of carbonic acid, sufficient to reduce it to a powder. It is certain that grubs are less numerous in fields that have been recently limed, than in lands of the same quality, to which no lime has been applied. Still, however, they live in such soils, and propagate their kind; and I am inclined to think, that after the lime has completely saturated itself with fixed air, and got into a mild state, the vermin will thrive equally well in such fields, as if no lime had been applied. One mode of prevention certainly is in the power of every farmer, namely, that of keeping the tops of ditches, and hedge sides, clean and free from that rough noxious herbage with which they are for the most part covered, and which, along with their serving as a nursery for grubs, and many other kinds of vermin, are a fruitful source of mischief, from the numerous weeds yearly produced upon them, the seeds of which are wafted into the adjoining fields by the winds, and, in spite of fallowing, and every other attention that can be paid, fur-

nish a fresh stock annually, by which the soil is constantly kept in a dirty state, and much labour and expence incurred, that might, with a small degree of attention, be avoided.

The varieties of the large moth, are very considerable; but their history does not differ materially from that now given, at least, as far as I have been able to trace it. The different kinds of caterpillar, with the exception of the early black one, belong also to the moth tribe.

No. 2. represents the black caterpillar, so destructive to the gooseberry and currant trees, in the early part of the season.

D, the Caterpillar,
E, the Aurelia, and
F, the Butterfly.

The caterpillar comes into existence early in September, and, in very dry, warm seasons, even sooner, and continues alive throughout the Winter, be the weather what it will. In late years, however, it is towards the end of November, or the beginning of December, before they are produced. When that is the case, they are very small and weakly in the Spring; and, if the season is favourable to vegetation, the gooseberry and currant trees push out a profusion of leaves, which places them beyond the reach of danger, before the vermin arrive at any considerable size; and as it is only upon the tenderest and most succulent leaves that they feed, an early Spring, by placing the foliage in an advanced state, soon renders it hard and unpalatable to them. In that way, many of them perish for want of food; and it is only the worms produced by the earliest eggs, that survive and get into the aurelia state. But, in years when the Summer and Autumn are warm and dry, and the eggs produce worms in September, or early in October, the vermin acquire a considerable strength and size before Winter; and, in the Spring, are so formidable, as to be able, by eating the heart out of the bud, before it is expanded, to strip the trees entirely, both of leaves and fruit; a thing that very frequently happens after dry seasons, especially in the immediate vicinity of large towns. When the trees are thus early deprived of their leaves, they appear as if they had been scorched by fire.

The black caterpillar, like the grub, is most vulnerable when it is in the aurelia state; and is then very readily destroyed by cold or moisture. But instinct seems to have taught the worms the secret of preserving the future aurelia; for when they have arrived at that stage, immediately preceding the change they are about to undergo, they, in general, make choice

choice of a situation where there is little risk of their being injured. Accordingly, the aurelia is, for the most part, found either in crevices of the wall, or attached to the under part of the leaves, which afford them complete shelter; in that way, very few of them perish.

For the destruction of this species of vermin, many remedies have been recommended; most of them, however, without effect: and I am inclined to think, that, in cases where they have bred in great numbers, and made considerable progress in the Spring, their destruction will be a difficult, if not an impossible task, even with the most powerful remedies. But, though we are yet, in a great measure, without a remedy in that stage of the evil, the mischief may be prevented, at an earlier period, by very simple means.

Every attentive man must have observed, that these vermin appear first at the bottom of the bush, and travel upwards, stripping the branches entirely in their progress. A very satisfactory reason can be given for the caterpillar beginning its depredations at the bottom of the tree. The same instinct that directs the worm to seek a safe sheltered situation for the aurelia, influences the butterfly, in depositing her eggs, which she uniformly does, either upon the under part of the branches or leaves: in both of these situations, they are sheltered; and when the leaves fall in Autumn, they are equally safe; as it is well known, that the leaves of trees, when collected in sufficient quantity, afford the best protection against frost and moisture; a circumstance, of which any person will be readily convinced, by turning over a quantity of them, either during frost, or after heavy rains, when the ground, even in the most intense frost, will be found dry and soft under them. Thus cherished and protected, the vermin remain at the bottom of the bush till the Spring, when they begin to ascend in search of food; but, as they do not leave the root before vegetation has made considerable progress, the task of destroying them is then easy, and may be completely effected, in the following manner.

Take two or three handfuls of burnt limestone that has been reduced to powder by beating, without being previously slacked, either by the action of the air or by moisture; spread the lime thus powdered round the root of the bush, cover it with earth, and give it water sufficient to slack it. During that operation, the whole of the vermin are destroyed, without the smallest injury to the bush. I have tried many remedies; but never found any of equal efficacy. Tobacco

liquor, and other nauseous ingredients, are in some instances *useful*, but not certainly *effectual*, especially in wet weather; as they are in general washed away by the first rain, and their effect lost.

No. 3. represents the green caterpillar, so destructive to the larger kinds of fruit trees in the Spring.

G, the Caterpillar,
H, the Aurelia,
I, the Grub.

It is a moth of an ash colour, the points of the wings tipt with white. The eggs of this insect are, for the most part, laid either in the crevices of the wall, the cracked parts of the bark, or in the outer husk of the buds that are to produce the fruit blossoms the following season. Like the black caterpillar, they are extremely hardy, and tenacious of life; and do not appear to be at all affected by the weather, either in the egg or worm state. They do not, however, come into life so early; it being generally the middle of March, and, in backward seasons, still later, before they are produced. When about to pass into the aurelia state, they are still more susceptible of injury than any of the preceding. They are also more readily destroyed by the application of nauseous ingredients: a solution of aloes alone will answer the purpose, if made pretty strong, and applied to the branches with a brush, before the blossoms begin to expand. The value of this preparation does not consist so much in killing the vermin, as by rendering the leaves and blossoms nauseous and unpalatable, and in that way preventing their feeding upon them. Tobacco liquor added to the aloes, if carefully applied during dry weather, is certainly fatal. But, as this moth is most destructive to trees placed upon walls, particularly such as are naked, and full of holes, which afford shelter, not only to this moth, but to vermin of almost every other description, a pretty effectual remedy will be met with, in first brushing off all the loose lime, and afterwards harling or dashing the walls with quick lime, in such a way as to fill up every interstice. If this is carefully done about the end of Autumn, and the precaution used, of brushing the branches with a solution of aloes and tobacco liquor, in the Spring, as formerly mentioned, the greatest part, if not the whole race, will be destroyed.

There are two other kinds of gooseberry caterpillar, more common in country situations, than in the vicinity of towns; which are exceedingly destructive, and have hitherto baffled every attempt to destroy them. They are of the same size

as

as the apple vermin just now described; and are produced, the one by a small moth, with orange-coloured wings, fringed with black spots; the other by a moth with an orange body, the wings light grey, slightly spotted with yellow and black. That with the orange wings generally appears early in June; and, if the weather continues warm and dry, does considerable mischief, unless great pains are taken to destroy them. I have tried many remedies, without effect. Spreading a sheet over the bushes, and fumigating with sulphur, is certainly destructive, if properly done; but, along with its destroying the vermin, it sometimes entirely kills the bushes, and, in every instance, is attended with the entire loss of both leaves and fruit for the season: It is therefore a dangerous remedy, and ought never to be resorted to. Many years ago, I succeeded in clearing my bushes, in a way that, along with its being easily put in practice, in every situation, is attended with no injury to the bush.—It consists simply in spreading a couple of sheets upon the ground, one on each side of the bush, close to the root, so as to cover a space fully larger than the branches reach; when that is done, give the stem four or five smart strokes with a stick, near the root, which will stun the vermin, make them lose their hold, and hang quite loose; in that situation, they are easily shaken off by the hand, and admit of being clean gathered up, and destroyed, either by burning, or otherwise. In every instance where this has been properly done, it has been effectual, and not only preserved the crop then upon the bushes, but been the means of keeping them clean the following season.

The other moth, with the yellow body and grey wings, is seldom seen sooner than the beginning of July, unless the season is very warm. About a couple of weeks thereafter, the caterpillars become visible upon the bushes; and, if not timeously prevented, very soon strip them entirely of their leaves: Like the former, they resist every attempt to kill them by poison; and can only be got the better of by hand-picking, and shaking the bushes, in the manner above described.

In this place, I think it necessary to destroy the delusive idea, held out to the public, of an effectual remedy for this kind of vermin, for which a premium was given by the Highland Society. I have repeatedly tried it with every possible degree of care; in no instance has it been completely effectual; and, in a great proportion of the trials, it has entirely failed.

Such a caution is the more necessary, as many gardeners, who have a considerable dependence upon their gooseberry crops, by trusting to it, may neglect the more effectual method of cleaning their bushes, by shaking, and collecting the vermin. In conclusion, I have to add, that no better preventative can be used against the whole tribe of vermin, by which gooseberries and currants are annoyed, than that of sprinkling a little shell lime, that has been beat into a powder, at the root of every bush, about the end of Autumn, and managing it in the manner already pointed out.

I am, &c.

A. Z.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Communication from Sir JOHN SINCLAIR, Bart. M. P. on the Subject of Folding Sheep.

GENTLEMEN,

THERE is no particular, connected with the management of sheep, that has been more keenly controverted, than the propriety of folding. I was anxious, therefore, on that important subject, to obtain the opinion of one of the most intelligent farmers in England, namely, Mr John Ellman of Glynd, near Lewis, in Sussex, the founder, I may say, of the celebrated South Down breed; and I subjoin the substance of his sentiments upon it. The result seems to be, that though folding is not calculated for rich land, or small inclosures; yet, in hilly districts, where it is adviseable to raise Winter food in the low parts of the farm, for the great numbers of sheep which the upper parts can maintain in Summer, such a practice may be of great use. Indeed, from Mr Ellman's calculations, it would appear, that, at the rate of 4s. 6¾d. *per* sheep, the English farmers make more by folding, than many tenants in the Highlands of Scotland do, from both their sheep and wool, under the present system of management.

With my best wishes for the success of your interesting publication, I remain, Gentlemen,

Your humble and obedient servant,

Charlotte Square, Edinburgh, 3d July, 1801. JOHN SINCLAIR.

Extract

Extract of a Letter from Mr Ellman to Sir John Sinclair, on the Subject of Folding Sheep.

"According to your desire, I now send you my thoughts on the advantages, and disadvantages, of folding sheep; and first, beg to observe, that I am not so far an advocate for folding, as to think it right in all situations; particularly in small inclosures, where driving the sheep to and from fold, might materially injure them, and destroy a great deal of grass, by trampling on it. I am ready to acknowledge, that a greater number of sheep might be kept on a given space of land, divided into small enclosures, by laying them in small parcels, than if kept together in one flock and fold. Acknowledging this, does not prove, that folding, in other situations, has not its advantages, particularly in an open country. In such a situation, there is not the same injury done, by treading down the grass, as in small fields: but, on the contrary, the farmer is enabled to manure such part of his farm, as he may think proper, particularly that which lies at a distance from the farm-yard, and which seldom, if ever, has the dung cart going on it. Mr Young observes in his Annals, (Vol. XXI. p. 615.) "I believe, the reason why farmers are such warm advocates for folding, arises from the power it gives them, of sacrificing the grass land to the arable." This I do not agree to, as, on many farms, the sheep are supported more from the arable, than the grass land, and often folded on the latter. Taking the sheep off their feed to lodge in the night, we think of great use, as it prevents dropping their soil on the pasture (what our shepherds here term *stenching* their food), which we look upon as of great use at the time when we are feeding our sheep on tares, clover, turnips, or any artificial food. I always caution the shepherd, as soon as the sheep have done feeding, to drive them off immediately, and not let them lye down, or stop to soil their food. Some shepherds are not so careful; in such cases, I observe the sheep never eat clean. I believe few animals (indeed, I know of none, except swine) which like to feed where they drop their soil; and it is fair to suppose, that the All-Wise Disposer of events has so ordered, that the brute creation should be endowed with that degree of instinct, which enables them to refuse such food as is not whole-

wholesome. This, we have an opportunity of ascertaining, when we fold on the grass lands. The sheep always refuse the first shoot of grass after folding, and will not take it while they can get any other; and, if obliged to feed on it, it is certain to cause the flux. Another advantage arising from folding, is, keeping the sheep confined in the fold, particularly in the Autumn, till the hoar frost and heavy dews are gone off the grass, which prevents the disorder here called the red water, and which in some places is called the blood or white water *; in fact, the dropsy. This disorder I believe most sheep are liable to, and is caused by taking into the stomach too great a quanity of fluid. Many other reasons might be advanced in support of folding; but I hope, what has been stated is sufficient to prove, that the practice has some merit. And now I beg leave to state the *quantum* and value of folding.

Just twenty South Down sheep (if a larger sheep, a less number will do) will fold one rood or rick *per* night; 3200 will fold one English acre *per* night. We value the manure at from 35s. to 50. *per* acre; the goodness of which depends much on how the sheep are kept: if kept on artificial food, such as tares, rape, clover, turnips, &c. they will drop more soil, than if fed on grass only. Supposing we estimate the folding at 40s. *per* acre, it will amount *per* year to 4s. 6¾d. *per* sheep, 22l. 16s. 3d. *per* hundred, or *per* thousand 223l. 2s. 6d. This calculation is made, supposing the sheep are folded through the year. If it is a breeding flock, it might be well to omit folding, for five or six weeks immediately after lambing, as the young lambs might suffer from being trampled upon, and, from driving to and from fold, would often lose their dams, and suffer in that way more than if they remained quiet.

I have often disputed the practice of folding with the late Mr Bakewell, who always, to make use of his phrase, said, "It was robbing of Peter to pay Paul;" and there we stopped. But if I had not to boast of bringing that truly celebrated breeder over to my opinion, I can say, that no argument I ever heard him, or any other person advance, in the least altered mine."

FOR

* Supposed the same with what in Scotland is called the *brany*.

FOR THE FARMER'S MAGAZINE.

LETTER VII.

Strictures on Farm-Management near London.

(Continued from p. 278.)

August 1799.

OUR soil seems to me excellently adapted for the culti-
ın of beans; but your bean-husbandry is slovenly in the
:me. Beans, properly cultivated in drills, and thorough-
orse-hoed, hand-hoed, and weeded, in the intervals,
ı a cleaning crop of the first quality. This crop judi-
sly and industriously managed, is an excellent auxiliary
he perfect fallow which has gone before, and a fine pre-
tive for the next fallow which is to succeed it, in the fol-
ng coarse of rotation; besides being a most perfect
aration for a crop of barley or wheat immediately after.
when sown broadcast, more especially on land that has
dirtily fallowed, or, to speak the truth, not fallowed at
their effects are the direct contrary of all that I have
d. They grow open at the roots, and give room for
ls of every kind to thrive among them; thereby becom-
themselves a foul and scanty crop, and ruining the con-
n of the land for every thing that is to succeed them.
Then sown in drills or rows, twenty-four to twenty-seven
ıirty inches apart, beans admit of being ploughed be-
n, like turnips or potatoes, and being hand-hoed and
led in the rows. By these means, joined to the clean
w already recomended, and weeding the corn crops,
:h should never be omitted, the land can, and ought to,
lean like a garden: and, by such means, the whole e-
y of the soil is exerted in the production of crops of
, and other valuable plants with which the judicious hus-
man wishes it to be occupied; instead of expending a very
t portion of its vigour in the growth of unprofitable weeds.
drill machine for sowing beans, of a very simple con-
:tion, is used in this country, which answers the pur-
admirably, and only costs from fifteen shillings to a
ea, or thereabout. It is a square box with a cover,
nted on two light wheels that extend the breadth of two
ı, having a funnel, or hopper, that hangs in the inter-
ate drill to be sown, and a cylindrical hair-brush to let
out

out the beans regularly. The land is made up in straight lined drills of a proper width, and regulated in its depth according to that of the soil, by means of the double mould-board plough. The drill-box runs along these drills, giving out its seed regularly; and the double mould-board plough afterwards splits the drills or ridgelets, and covers up the beans.

The plough you have, with two mould boards, answers extremely well for forming the drills, covering in the seed, and earthing up the rows finally, after the land has been properly cleaned. It would be a great deal more convenient for the purpose, if the mould-boards were made to shift, wider or narrower, as occasion might require; and if the left hand mould-board took off occasionally, so as to gather the soil into a ridgelet between the drills, by going twice about before hand-hoeing. After this, with both mould-boards on, and regulated to a proper width, the gathered ridgelets are split open, and the earth laid back to the roots of the plants.

The regular system of bean husbandry is shortly as follows. The land intended for beans should be ploughed before Winter, and laid completely dry by water furrows and cross trenches all carefully opened up by the spade. Very early in Spring, the gathered ridges or lands should be cloven down; immediately after that, cross-ploughed and harrowed; then drilled up and sown as fast as possible. If the land is very clean, and in fine tilth, the cross-ploughing may be omitted.

After the beans are up, and the first crop of annual weeds, plough between the rows, gathering the soil between them, and going as near as possible to the beans, without injuring them. Then hand-hoe the small part of the drill left, and carefully hand-weed between the plants. When a second growth of weeds has risen, hand-hoe and weed again. And lastly, split open the gathered ridgelet, earthing up the beans. After this, they have got so much head, as pretty surely to prevent the farther growth of weeds.

Some very good husbandmen, in this country, sow their beans in a different manner, which requires a good deal less ploughing. Three common ploughs are employed, the drill box following the third; so that the beans are sown in every third furrow. The land is always very well harrowed, some time before the beans appear, to destroy any weeds that may then have sprung up. The after management of horse and

hand-

hand-hoeing, is exactly the same in both cases: so that, although in this way the land is not raised at first into drills, it becomes afterwards formed in that way.

Another practice of many excellent farmers, must be here noticed. Instead of ploughing away the soil from the rows, they use a kind of skimming plough, or horse-hoe, having a flat share, somewhat like a mason's trowel, with two long wings projecting backwards. This is inserted a little below the surface, and cuts off all the weeds between the rows. The hand-hoes destroy those that are too near the beans for this skimmer or horse-hoe. The skimmer and hand-hoeing are repeated two or three times, according to the prevalence of weeds: and, finally, the double mould-board plough earths up the rows. Where people for hand-hoeing are very scarce, farmers sometimes endeavour to bury the weeds, by twice earthing up the intervals, by means of the double mould-board plough. *R.r.r.r.*

LETTER VIII.

Strictures on Farm-Management near London.

August 1799.

THE plough, which I saw used, for general purposes, in the whole country between London and your estate, and for a great way north, seems to me a very clumsy and cumbrous instrument. I do not pretend to enter into any mathematical analysis of the construction and action of ploughs; but, from what I saw of this plough in Hertfordshire, where I took very particular notice of several of them in action, it seems a very heavy draught for the horses, and extremely laborious, even for the man who holds the stilts. Neither, so far as I could judge, did it seem at all well calculated for reducing the land into good tilth, or for performing any one operation in husbandry to advantage. So far from turning over the ground, which, according to my ideas and information, is a very necessary operation in all good husbandry, it seemed only to move the plit from one part of the ground to the other; leaving it altogether to chance, for the top of the old ground to fall off into the last made furrow, with a part of the weeds along with it.

This heavy inefficient instrument, I should suppose to be the old implement of our half-barbarous ancestors, altogether

ther unimproved. It resembles very much the old Scottish plough, in the length and lowness of its beam, and in the form of its mould-board. In this country, the old plough has long and justly been laid aside, on account of the difficulty and consequent expence of its draught; and I have only occasionally seen it, in out-of-the-way mountainous districts, where improvements have not hitherto been able to dissipate the mist of ignorance and prejudice, and where, of course, the rents still continue low, and the husbandmen poor.

The plough which is now universally adopted in every improved district, in the South of Scotland, and North of England, came, I believe, originally from Yorkshire, under the name of the Rotherham plough; and I have reason to believe, it is of Dutch or Flemish origin, as I have heard that, in Yorkshire, it is called the Dutch plough. Whatever be its origin, this plough was very much improved, in its form and materials, by a country plough-wright in the county of Berwick; and, from his name, it is now generally called *Small's Plough*. It answers every purpose in general husbandry, infinitely better, and more commodiously, than the old Scottish plough, which, as I said already, resembles your's or the Hertfordshire plough, and is vastly easier both for the man and horses. In its employment, it is drawn by two horses abreast; and the same man who holds the stilts, directs the horses with long reins, and by his voice.

When the land to be ploughed happens to be very tenacious and difficult, as in stiff clay soils after long drought, it is then usually drawn by three horses, and driven by a boy. In this case, two of the horses are yoked abreast, to what is named an advantage swingle tree; and the third horse is yoked by traces in front of the land side, or near, horse.

I do not answer for the precise exactness of the following statement, as I report altogether from memory, at the distance of several years; but I am certain they are very near the truth. In the same field, and doing exactly similar work, ploughing out old grass ley, with a plit of regular and equal depth and width, our old plough, which resembles yours, and our new one, as improved by Small, were compared together, in presence of a large party of gentlemen and practical farmers. By interposing a graduated spring steelyard, fastened to the heads of the ploughs, between the resistance and the draught, the forces necessary for working

ing both were exactly ascertained. The old plough required a power equal to fifteen or sixteen hundred weight, to impel it heavily through the ground; whereas the new one required only a power corresponding to eight or nine hundred weight at the most.

It is scarcely necessary to offer any commentary upon the result of this experiment. To draw the old plough, requires uniformly four horses in strong ground, especially for the first ploughing; and, if the ground be very dry and much caked, four are unable for the work. Hardly ever does the improved plough require more than two; and, in no case, of land unincumbered with sitfast stones, more than three ordinary horses; and where it requires three, the old one will need six. In this part of the country, and in ordinary years, the hire of a man and pair of horses for a day's work, is about five shillings; which may therefore be reckoned the cost of ploughing a statute acre with Small's plough *. The addition of two horses and a lad, which are necessary for the old Scottish plough, and, I presume, likewise for yours, will very nearly double the expence of ploughing an acre in your way. Even supposing that the subsequent ploughings of a fallow, with you, should require only three horses and a driver, and with us, on similar land, that three horses and a driver are necessary for the first ploughing; you will see that, taking every thing together, the new plough will do its work for half a crown an acre, each ploughing, cheaper than the old one.

Only in one case, that I know of, is the old plough superior in efficacy to the new; and that is owing solely to its vastly greater strength, and heaviness of construction. This is for tearing out, from a state of nature, land that is incumbered with sitfast stones, or with the roots of trees and bushes. For such purposes, I have known a plough altogether constructed of iron, and drawn by six or eight horses.

As

* For a considerable time back, an acre could not be ploughed for less than 7s. 6d.; and last year, owing to the high price of every kind of fodder, &c. it was nearly twice that sum.

Note by the Conductors.

The old Scottish plough has certainly been laid aside, on account of the resistance made to it by the soil, and the great strength required to draw it; but, so far are the principles, upon which it was constructed, from being wrong, that Small's plough is, with very little alteration, the old Scotish plough upon a reduced scale; and the same implement, upon its largest scale, is still used, in situations where a deep strong furrow is required, and does its work uncommonly well.

As a counterpart to this, I must inform you, that I have lately been informed of a poor man in my neighbourhood, who worked a small farm, of free soil, for many years, with one horse only.

A great deal has been said and written lately, in favour of working farms by oxen, instead of horses. I do not wish to enter upon a subject of controversy, in which men of very great talents have engaged on opposite sides. One very strong reason against oxen, *à posteriori*, is, that they are every where in this country given up by the farmers, who certainly ought to be the best judges of what is, or is not, profitable. But the matter may very readily be explained in another manner; which may be termed *à priori*. Formerly, owing partly to a bad breed of cattle, and partly to an improper manner of bringing them up, oxen could not be fed off for market, till seven or eight years old. It was then wise to work them for two or three years; as, while still only store cattle, they were old enough, and firm enough for working. Now, partly from having improved the breed, and partly from improvements in the methods of rearing, bringing up, and feeding them, oxen can be fed off, with profit, at four years old; when they are still too young, and too tender for work of any labour or difficulty.

I shall not enter upon the discussion of, whether the beef of these younger oxen be equal to the older, or inferior. I readily grant it to be inferior. But, so long as the public chooses to purchase young beef, and the farmers thus find it their interest to feed off their cattle young, horses must continue to be the beasts of draught, wherever profit is the ultimate object of the husbandman. Country gentlemen of fortune, who hold arable ground in their own hands, and who wish to have their tables supplied with beef of superior quality, may, on the other hand, very properly employ a few teams of oxen in their ploughs; and will thus turn two or three years of an ox's life to profit, which would otherwise be idly spent in the field or fold-yard.

On the comparative advantages and disadvantages of horses and oxen for farming work, I must refer you to the Agricultural Report for Northumberland, in which that subject is most ably and satisfactorily discussed; though I think the calculations are underrated, and ought to have shewn a much greater preponderance in favour of horses. At all events, the Reporter distinctly proves, that ox teams, universally adopted, would unquestionally produce a famine.

Yours, &c. *R. r. r. r.*

TO

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On Subsetting Farms.

GENTLEMEN,

THE question, under what circumstances a lease or tack of a farm in Scotland may be assigned or subset, is one of no trivial importance to the general interest of the community.

It is strange, that, while our courts of law are liberally undermining the other parts of the Gothic system of jurisprudence, they should now be strengthening the foundations of that part of it which tends directly to render farms extra-commercial property.

By the law of England, I believe, leases are not only assignable, but the proprietor of the farm must, on an assignment of the lease, declare his election, whether he inclines to hold the original lessee bound for his rent, or trusts to the assignee, as he cannot have both; and, on the whole, a lease, whether granted for a long or short term of years, seems to be held, there, under as ample powers as the proprietor might have possessed the ground himself, for the period of the lease.

From the present interpretation of the laws of Scotland, by the decisions of the Court of Session, a tack of lands does not imply a power, either to assign, or even to subset, although, in the latter case, both the principal lessee and subtenant were always understood to be bound for the rent to the landlord.

Tacks, in general, are, by the commentaries of our lawyers, considered as unassignable, from their being supposed to imply a *dilectus personæ*, or election of the person of the tenant by the landlord: Yet it is admitted, that a liferent tack is assignable, which surely implies more of a *dilectus personæ* than any other. All tacks, likewise, that are to subsist for a great length of time, are also assignable, as well as subsettable; but, rather unfortunately, the length of endurance necessary for conferring this privilege, hath not been fixed by law. By a late decision of the Court of Session, in the case, Simson against Gray, 22d May 1794, it was found, that a power of subsetting was implied in a lease of thirty-eight years. With submission, there seems to be no

solid ground for any distinction, in judging a tack assignable or unassignable, derived from the length of its duration merely.

By the feudal law, this *dilectus personæ* was carried so far, that even an heir was not permitted to enjoy the tack of his father, unless it was so expressed in the lease. What an obstacle, this, to the improvement of the soil! And does not the exclusion of assignees in tacks, remain an obstacle of the same nature? What an incentive, on the other hand, to industry, if a tenant, who had successfully improved one farm, had it in his power to assign his tack, and remove to a new and wider field for exercising his talents! Nor does there seem to be any sound reason, that a tenant, who now-a-days generally buys his tack, as the highest bidder, at a public or private sale, should not have it in his power to sell it again, to avoid loss, or obtain profit, to any person able to pay the rent, as freely as a proprietor of lands sells his property, when he finds it does not suit his views. This plan would be much more reasonable, than that the law should force a tenant to remain in a farm he cannot manage, till he is utterly ruined; as is but too often the case.

Moreover, if a tenant does become bankrupt, it is hardly to be expected, that an adjudger, who enters to his farm from necessity, and is accountable as a factor, will do any thing for the improvement of it: for it is held as law, that a tack which bears no power to assign, may yet be adjudged by a creditor of the tenant. Expediency may, therefore, in every view, be strongly urged in favour of a more unlimited power in assigning tacks.

The idea of a *dilectus personæ* seems to have arisen from circumstances of a temporary nature, now no longer of consequence; from the rudeness of the age, landlords then relying more on the fidelity of their tenants and retainers, than on the protection of the laws; from the municipal regulations of the country, which rendered proprietors of the land responsible for the conduct of those who resided on their estates; and also, from the nature of the prestations then exigible from tenants, which, consisting almost entirely of personal services, brought them nearer the state of menial servants, than that of modern farmers. Hence it was, that a lease, during these periods, was considered as a contract *stricti juris*. If given to a woman, it fell by her subsequent marriage. If to a man, it became void by his death.

death. It was, alike, incapable of voluntary, as of judicial transmission.

But, for more than a century past, this contract having been treated by the Legislature, and wisely enforced by our Judges, in conformity to the sense of the country, has regained much of its original nature. It is no longer the personal services of the tenant, or his peculiar qualifications, but the rent, in money, which he can afford to pay, which a landlord has in view. Accordingly, the Court of Session have found, that the principle of law, regarding tacks *not bearing to assignees*, being unassignable without the consent of the heritor, does not apply to urban tenements; and, on that principle, on a question, as to a tack for thirteen years, of a house in a burgh, it was decided, it might be assigned without the consent of the proprietor.—Kilkerran & Falconar, January 7. 1748, Aitcheson *against* Benny.

As to subtacks, as Mr Erskine observes, there was not the same reason against sustaining them, as against sustaining assignations; because, by a subset, the principal tacksman is not changed. On that principle, the power of granting them, seems to have been ever, till of late, recognized as implied in a lease, by our law, as it was by the Roman law.

This power, however, was questioned in the years 1686 and 1687. The first case was, of a tack of nineteen years let to a person, secluding his assignees. It was contended, that the exclusion of assignees, implied the exclusion of subtenants: But the Court of Session decided, that the tack might be subset. Sir James Roughhead *against* Mudie.—And to the same judgment, the Court adhered, in a similar case, decided the following year: Madder *against* Lord Tarras.

This implied power in tacks, of subsetting, seems to have been understood to be a settled principle of law, till lately. But that material point of public policy was not altered by any act of the Legislature, but by a decision of the Court of Session. It was first considered on general grounds, in the case of the Earl of Peterborough *against* William Milne, decided 8th March 1791. A missive of tack, to endure nineteen years, which made no mention of assignees, or subtenants, was, by the Court, found, neither capable of being assigned, nor subset.

There have been several decisions, since, to the same purpose; but as none of them have hitherto been appealed, and received the judgment of the House of Peers; till then, it

is understood that the law is, as interpreted in the case of Milne above mentioned.

The writer of this paper, had himself a similar question decided against him last year, by the Court of Session; and, considering the judgment to be erroneous, and such as would not be supported by the Court of Review, he appealed it; but the matter was, before a decision of the Peers, submitted to arbitration. He recommends, that the first similar case that occurs, should be appealed by a subscription of farmers. And he cannot help thinking that it would be more conducive to the improvement of the country, if all restrictions against assigning and subsetting were abolished, than that the free disposal of property should receive, by implication, additional fetters.

A. S.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On the Mischief arising from Thistles and other Weeds by the Sides of Roads and Fences.

GENTLEMEN,

I WISH you would, through the channel of your Magazine, point out the mischief arising from the slovenly practice of allowing thistles, and other bearded weeds, to grow and shake their seeds by the road sides, and along the whole line of fences in many farms, and which are annually carried by the winds into the adjoining fields, where they prove a fruitful source of mischief. Were a little more attention paid to this subject, and to the kind of hay-seeds sown, much expence and labour would be saved, and fewer absurd complaints made, of the tendency of particular fields to run to weeds. It is to slovenly practices, that dirt is owing: "Whatsoever a man soweth, that shall he also reap:" Whoever sows bad hay-seeds, will reap the natural produce; and *vice versa*. I hope, at no distant period, to see a law, making dirty farmers liable for the damage done, by their bad management, to their cleanly neighbours.

Yours, &c. R. S.

TO

TO THE CONDUCTORS OF FARMER'S MAGAZINE.

The Effects of Lime, in destroying Heath, and producing White Clover.

GENTLEMEN,

HAVING observed, in many parts of the hills and uplands, where shell lime has accidentally fallen, that the heath dies, and white clover rises in its place; I am inclined to think, that the application of a very light dressing of quick lime, upon newly burnt heath grounds, would, without tillage, or any other expence, at once destroy the heath, and cover the surface with that valuable plant. Indeed, I see no reason to doubt it; for, if lime destroys heath in a healthy uninjured state, it will certainly do it more readily after burning, especially if that operation is done at a time when the plants are in a growing state. The insertion of this in your Magazine, may be the means of procuring information of some successful experiments, made upon a subject of much interest to the proprietors and occupiers of heath lands. I am, Gentlemen, yours,

A FRIEND TO IMPROVEMENT.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Whether Large or Small Cattle are most profitable.

GENTLEMEN,

OBSERVING the 14th Query in your first Number, respecting the grazing of cattle, I shall state a few particulars, in answer, founded upon my own experience. If they contain any thing worthy of notice, they are at your service.

Query, Whether are large or small cattle most advantageous on a grass farm?"

The answer depends almost entirely on the soil; for the better that is, the larger ought the cattle to be. When grazing for the flesher, I have generally found the best returns, by regulating the size of the cattle, according to the soil, as

under:—Land requiring three acres to fat a middle-sized beast, or from 18 to 24 stone; when two acres would fat a beast, as above, from 24 to 30 do.; and when one acre would do it, cattle from 30 to 40 do. or upwards; counting 16 lib. English to the stone.

A grazier, who wishes to make the most of his business, will take care to buy his cattle from an inferior soil, of a good kind (or breed) and not above the market price: If young cattle be taken from a good to a worse soil, they are apt to become stinted in the growth; and, if old enough to feed for the butcher, they will not feed so kindly as those from a worse soil. On the other hand, if cattle be brought from a very poor soil to a good one, they will likely be too small in the bone, to give good returns. I am, however, of opinion, that the grazier's profit does not depend so much upon the size of the cattle, as upon the choice of a real good breed, of a fit age, and from an inferior soil. I am, Gentlemen, with respect, yours,

22. *March*, 1801. A CLYDESDALE FARMER.

On Waste Lands.

FROM the sense in which the term *waste lands* is used, in some parts of your Magazine, it is probable that many things have been absurdly projected, both in politics and agriculture, from an inaccurate idea as to the term.

With some, it has been understood, that William the Norman, and his sucessors on the throne of England, threw large quantities of land into forests, parks, and chases, for the amusement of hunting, in different parts of the kingdom, where they might either generally or occasionally reside; and that these constitute the *waste lands*. And as his Majesty gave up his hereditary revenues in this kingdom, confining himself to the civil list; on this idea, there could be no harm in disposing of them, to defray the national expence, burdened always with the present leases, &c.; and it might be believed, that the purchasers would improve these themselves, if sold in proper lots, and thereby benefit the nation, besides the price going into the treasury, to reduce the national debt. It is said, the value of these lands amounts to many millions.

But

; if, on the other hand, *common* lands, in the neigh-
ood of a town and manor, which have been pastured,
than brought into a state of cultivation, because of
ultitude of interests, and difficulty of management,
be understood as *waste lands;* then, a sale of them,
tting the money into the public purse, would be an
ce, equal to that of seizing on a private person's estate,
, or barony. And the matter to be considered, is,
is the best and cheapest mode of management? On
occurs, that a statute, for all England together, similar
act for that purpose in Scotland, 1695, c. 3, might have
st effect. By this act 'it is statuted and ordained,
all commonties, excepting commonties which belong
King in property, or to Royal burghs in burgage, may
ided, at the instance of any having interest, by sum-
(process) raised against all concerned, before the Lords
sion (Supreme Court of the jurisdiction,) who are, by
id act, empowered to discuss the relevancy; and to de-
e upon the rights and interests of all parties concerned;
value and divide the same, according to the value
rights and interests of the several parties concerned;
grant commissions to Sheriffs, Stewards, and their
s, and Justices of the Peace, or others, for peram-
g, and taking all other necessary probation; which
ssion shall be reported to the Lords, (or Supreme
) and the process shall be ultimately determined by

this act, the Court are also empowered, either to divide
which happen to be in the said commonties; or, if
losses cannot be conveniently divided, to declare, that
all remain common, with free ish and entry thereto,
s and regress), whether divided or not.

division, where the question is among the common
stors, is governed by the clause in the statute, *according valuation of their respective properties:* But, where the
n turned between the peoprietor, or proprietors, and
hat had servitudes of common pasturage upon the
ty, the rule mentioned in a preceding clause of the act
ace, by the former practice, *according to the value of the s of the several persons concerned.* Hence, proprietors
llowed a *præcipuum* for their right of property, over
ove the share, on account of their own, or their
s possession, by pasturage. But now, the superfice
divided, without prejudice to the property; the

interests of those having servitudes of pasturage, are ascertained by the number of beasts that graze thereon, and, if this is indefinite, according to the number that each of them can fodder, in Winter, upon his own dominant tenement.

In the division of commonties, the share to be allotted to each heritor, is appointed to be made next adjacent to his property.

So far the Scots statute, which extends only to that country Commonties may also be divided by arbitration.

This division being authorised, a clause might also be inserted, whereby any of the parties could compel the other to concur in inclosing, and pay his proportion of the expence, either in money or land.

These powers once granted by a single statute, the matter would operate gradually itself; till, in a short time, none of these commons would be left; and the proprietors might improve their shares at pleasure.

It appears, from Blackstone's Commentaries on the Law of England, that both kinds of law, mentioned above, are understood by the term *waste lands:* Thus, in b. ii. p. 14. notice is taken of '*forests* and other *waste grounds*, which were omitted to be appropriated in the general distribution of lands: and as disturbances and quarrels would frequently arise among individuals, as to the acquisition of this species of property by first occupancy, the law has therefore wisely cut up the root of dissension, by vesting the thing itself in the Sovereign of the state, or else in his representatives, appointed and authorised by him, being usually lords of manors.'

From b. iv. p. 415, it appears, these were at least extended considerably by William of Normandy, and his successors.

As to the other kind, more properly termed *commons*—'in the division of a *manor*, after mentioning the *demesne* lands occupied by the lord—the *charter land* given to the vassals—the *folkland* held at the pleasure ot the lord, who became afterwards *copyholders*—' it is added, 'the residue of the manor, being uncultivated, was termed the *lord's waste*, and served for public roads, and for *common of pasture* to the lord and his tenants.'

The Scots having so early provided for the division of these last, there are hardly any commons remaining in that part of the kingdom: But there being no general law for that purpose

pose in England, private acts or statutes have been found necessary in every particular case. To put England, therefore, in the same situation with Scotland, in this respect, appears to be all that is necessary.

1. *December* 1800. MILONIDES.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Queries respecting Shell Marl.

GENTLEMEN,

HAVING met with no analysis of shell marl, which went farther than merely to ascertain the quantity of pure calcareous earth contained in it, give me leave, through the channel of your useful publication, to request answers to the following queries.

As the calcareous earth of shell marl, is evidently the production of different species of acquatic animals, when these creatures die, what becomes of the animal substance of their dead bodies? Does the fertilizing quality of shell marl depend solely on its calcareous matter? and does it contain nothing which arises from the decomposition of these animal bodies?

I am led to put these questions, from this circumstance, that the effects of shell marl upon land, appear to me to be more analogous to the effects of dung, than of lime.

I am Gentlemen,

Yours, &c. E.

FOR THE FARMER'S MAGAZINE.

On some of the Causes which retard the Progress of Agricultural Science, and Hints for its Improvement.

THE prosperity of States, and the welfare and happiness of mankind, depend more perhaps on the sucsessful prosecution of Agriculture, than on any other art; for, on the produce of the ground, must man ultimately depend for his subsistence; yet no science has been slower in its progress towards perfection. Hitherto, one great cause of the slow progress

progress of this art, has been, that, whilst its theory has been the subject of the ingenious speculations of closet philosophers, its practice has been generally confined to the unlettered peasant. But we may now hope, that, from the great increase of the capital employed in agricultural pursuits, and from its having, in a great measure, become a fashionable study, many farmers are now capable of joining theory with practice, and of investigating the philosophical principles on which the successful prosecution of it must depend.

Too many, however, of the speculations of agricultural writers, are directed, more to conjectural calculations, than to an accurate arrangement of facts and observations. Disputes about the proper size of farms, or calculations to ascertain what proportion of the produce ought to be paid as rent, have been the subject of many ingenious disquisitions. But these calculations are, for the most part, more apt to mislead, than to inform; as no rule, founded on the most accurate calculations on one farm, can be *strictly* applied to others: for I would almost venture to say, that no two farms can be found so exactly similar in soil, situation, climate, exposure, or distance from manure or markets, that the expence of working them can be precisely the same; and a very small difference in any of these circumstances, will occasion a great one in the expence, and consequently in the profit of the farmer.

By a numerons collection of facts and experiments, the general laws of the different branches of natural philosophy have been traced out and explained, and afterwards applied to illustrate the relations betwixt the different phænomena.

One reason for the very slow progress made in agricultural improvements is, the difficulty of making experiments with the necessary precision, and distinguishing the various causes and circumstances which influence their success or failure. We cannot subject the hidden process of vegetation to such minute inspection, as many of the other phænomena of nature. Experiments, which require for their completion a few hours, or at most a few days, may be conducted with more accuracy, and the action of different substances on each other more distinctly traced, than where they require months, and seasons, and even several years, to complete them, subjected to the endless variety of climate, exposure, state of the weather, and various extraneous circumstances. Here, we are always in danger of applying, to one cause, effects

effects which he produces by very different ones. Experiments may succeed in variety of soil, in one situation, and in one season; whereas in any of these, may, on a second trial, occasion [illegible]

Nothing conduces more to the [illegible] of science, than accurate definitions and explanations of terms employed; and, perhaps, in no science, is the use of such definitions more felt than in [illegible]. For vague manner in which soils are described, a different acceptation of the same terms in different counties, it is difficult for a farmer, when he reads a treatise of the agriculture in a different county and soil, to judge what relation such a soil may bear to the one he himself possesses. What is called clay, in some counties, may be accounted loam in others; and a free soil, [illegible] be accounted a stiff one in another. Mr A. Young remarks*, that in some parts of England, any loose clay is called marl; in others, marl is called chalk; and, in others, clay is called loam.

It would conduce much to the accuracy of agricultural experiments, if any of your readers, versant in chemistry, would point out an easy method of analysing soils, and such as could be performed by most farmers; so far, at least, as to ascertain the proportion of the different earths contained in them. An accurate table of soils might then be formed, arranged according to the quantities of their component parts; and then, a farmer, having analysed his own soil, could at once point out to which number of the table it might be most properly referred. Such a table would be of the highest consequence to agriculture, as it would afford the only sure mode of distinguishing, and comparing, the different varieties of soil. Until such an accurate table is formed, it might, perhaps, be of some use to attempt a classification of soils, from their most prominent and distinguishing qualities. Mr Kirwan, in his valuable Essay on Manures, informs us, that the principal ingredients in all soils, are, argile or pure clay, silicious or sandy earth, and calx, or calcareous substances. To these may, perhaps, be added, that sort of earth into which all putrefied animal and vegetable substances are at last resolved, and which I would call loam. Pure clay (says Mr Kirwan) feels smooth, and somewhat unctuous; if moist, it adheres to the fingers, and, if sufficiently so, it becomes tough and ductile; in the fire, it hardens, and burns to brick. By sand, is meant, small loose grains, of great hardness, not cohering with water, nor

* First Eastern Tour. Second Bath Mem.

nor softened by it. It is generally of the silicious kind, and therefore insoluble in acids. Calx, or calcareous earth, includes chalk, and all stones that burn to lime. They are easily distinguished, by their property of effervescing with acids. Light moorish, mossy, or boggy soils, consist chiefly of the ligneous roots of vegetables, more or less decayed.

But soils ought not only to be distinguished by their component parts, but also by the different subsoils on which they are incumbent; for these cannot but have a very great influence on the soil, and its productions. One soil on one subsoil, and a perfectly similar soil lying on a different subsoil, may require very different modes of management, and may have very different effects on the growth and luxuriance of the same plants. A *clayey loam*, may be defined, a clay mixed with rich black earth, called loam, but in which the clay evidently predominates. A *loamy clay* consists of a similar mixture, but in which the loam predominates. It is impossible to describe all the endless variety of soils and subsoils: I shall only attempt to mark some of the principal divisions.

SUBSOILS may be divided into,

No. 1. Cold clayey till, impervious to water.
2. Gravelly, or sandy bottom, pervious to water.
3. Freestone gravelly, do. do.
4. Limestone, or calcareous gravelly, do. do.
5. Loose whinstone rock, or slatey, do. do.

SOILS may be classed as follows:

LOAM, or BLACK RICH EARTH,
on a Subsoil of
No.
1.2.3.4.5.

CLAY,

CLAY,

DISTINGUISHED, BY ITS COLOUR, INTO

No. 1.	No. 2.	No. 3.	No. 4.
WHITE,	BLUE,	YELLOW,	BROWNISH RED,
on a Subsoil of	*on a Subsoil of*	*on a Subsoil of*	*on a Subsoil of*
No.	No.	No.	No.
1.2.3.4.5.	1.2.3.4.5.	1.2.3.4.5.	1.2.3.4.5.

CLAYEY LOAM,
of Colour No.
1. 2. 3. 4.
on a Subsoil of No.
1.2.3.4.5.

LOAMY CLAY,
of Colour No.
1. 2. 3. 4.
on a Subsoil of No.
1.2.3.4.5.

SAND or GRAVEL,

DISTINGUISHED INTO

No. 1.	No. 2.	No. 3.
WATER, SAND *or* GRAVEL	FREESTONE GRAVEL,	WHINSTONE *or* SLATEY,
on a Subsoil of	*on a Subsoil of*	*on a Subsoil of*
No.	No.	No.
1.2.3.4.5.	1.2.3.4.5.	1.2.3.4.5.

GRAVELLY *or* SANDY LOAM,
of No.
1.2.3.
on a Subsoil of No.
1.2.3.4.5.

LOAMY SAND *or* GRAVEL,
of No.
1.2.3.
on a Subsoil of No.
1.2.3.4.5.

CALX.

DIVIDED INTO

No. 1.	No. 2.
LIMESTONE GRAVEL,	CHALK,
on a Subsoil of	*on a Subsoil of*
No.	No.
1.2.3.4.5.	1.2.3.4.5.

MOORISH or MOSSY SOIL,

on a Subsoil of No.

1.2.3.4.5.

Each

Each of all these soils are again of different depths, situated in different climates, in different expostures, and of different degrees of declivity, &c. &c.: All which circumstances ought to be noticed in the account of agricultural practices or experiments. Though a numerous collection of facts and experiments, is the first and most necessary foundation of all agricultural science; it is also highly necessary, that some distinct plan or system should be laid down for the arrangement of these facts, that their relation to each other may be traced out and explained. A collection of separate and unconnected facts, would be somewhat like a dictionary, in which we might find each different word of a language explained, but by which we could never understand the language, without the help of a grammar, or theory of it. It is with much diffidence, that I would point out a plan to the *Conductors of the Farmer's Magazine*, which may appear to them visionary, but which, I apprehend, would tend to the advancement of agricultural knowledge. Let your correspondents be desired to give an account of the best mode of management of a farm, containing a given number of acres, suppose 400; consisting, principally, of one variety of soil and subsoil. From the accounts transmitted to them, let the Conductors publish that account which appears to them the best mode of management. Let these accounts be founded on existing practices, and on plans which have been actually followed out. This plan, if accurately pursued, would furnish the most complete information in agriculture; and, from the perusal of these accounts, a farmer would have it in his power to select such a mode of management, as appeared most fitted for the soil he himself possessed.

In these accounts, the information should be arranged under distinct heads or divisions; such as, 1*st*, the species and rotation of crops; and, 2*d*, the management of the live stock, whether working cattle, breeding, or fattening stock. In the history of each crop, let as particular an account, as possible, be given of, 1*st*, Preparation for the crop, mode of ploughing, the instruments employed, the season when ploughed, &c.: 2*d*, The species, and distinguishing qualities of the seed, the season when sown, the mode of sowing, and the quantity sown: 3*d*, Management, when growing: 4*th*, Harvesting, and mode of using it, if used on the farm.

An account, very similar to those here suggested, is contained in those articles in your Magazine, entitled, *Strictures*

on

Farm-Management near London. In these accounts, the writer cannot descend too much to particulars, as very much often depends on the minutiæ of practice. One obstruction to the progress of agricultural knowledge, arises from the difficulty there is in giving an accurate account of the practices of any particular district, without using those terms in its provincial dialect; which, though well understood by the writer, are often quite unintelligible to the farmer in a different part of the island. No term of that kind ought to be used by any writer, without attempting, at least, to make it generally intelligible. Another source of confusion, the discrepancy of weights and measures, would also be easily obviated, if every writer would take the trouble to reduce his provincial measures and weights to the standard of the Winchester bushel, the English statute acre, and the English pound or hundred weight. Were this done, it would very much enhance the value of the information contained in that article of the Farmer's Magazine, *Agricultural intelligence.* It would only occasion some little additional trouble to your correspondents at first, but would make their information far more intelligible to your readers. No writer has paid greater attention to accurate arrangement, minute particulars of practice, an intelligible explanation of provincial terms, than Mr Marshall; and no books on agriculture, perhaps, have been more extensively useful, than his Rural Economics. I would also request the attention of your Chemical readers, to the investigation of the qualities and properties of manures on philosophical principles; for it is really astonishing to observe the very contradictory opinions and practices, on this very important subject.

S.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On the Means of promoting a Spirit of Improvement in a Country.

GENTLEMEN,

I HAVE often thought, that it would tend much to promote the most important interests of the country, if persons were appointed, annually, to draw up *statistical reports* of the improvements, either actually carrying on, or likely to be executed, in each county; and were such reports both printed in the

the newspapers, and other periodical works, and laid before Parliament. The publication of such statements, might not only have the effect of rousing a spirit of emulation in the different districts, from which the happiest consequences might be expected; but, thus, one part of the country might obtain very important suggestions from another, with which it has no immediate means of intercourse. For instance, the mode of husbandry as practised in the fen counties of England, as Lincolnshire, Cambridgeshire, and Huntingdonshire, has been introduced into Caithness this year, and is evidently more likely to answer in a Highland district than any other. If that system succeeds here, which there is every reason to believe will be the case, what an advantage would it not be, to have the knowledge of that circumstance circulated at once over all the Highlands? In the same manner, it is of the utmost consequence, to have it universally made known, that the Cheviot breed of sheep will succeed fully as well in the North, if not better, than the common Black-faced. There are already several thousands of that breed in Caithness and Strathnaver, thriving as well as upon the Borders of England and Scotland; so that the point cannot be disputed. The difference to the landlord and the public, is very great; for the Cheviot breed, when once fairly established, can afford to pay double the rent of the Black-faced. Highland, and other proprietors, therefore, ought to attend to that circumstance, when they have sheep farms to let, and should encourage farmers from the Borders to take them. The success, also, that has attended the introduction of the red oat into the North, which is an earlier grain than the white, the grey, or the black oat, which is much less apt to shake, much more equal in point of quality or sample, (having in general but one pickle), and much more productive in regard to meal, ought to be as generally known as possible. But the great object of the proposed statistical reports, is, that the Government and the Legislature of the country should know what improvements are going forward, and what public encouragements are necessary to promote them. Any Government that would set out on the principle of promoting public improvements, would necessarily be entitled to the confidence of the country; and there is no way in which a Legislature can spend its time, or expend a portion of the public money, with more satisfaction, or to more advantage, than by encouraging such a spirit. Without dwelling, however, on these points farther at present,

nt, I shall now proceed to give a short sketch of the various improvements which have been carrying on, in the course of e year, in this remote corner; which, I hope, will sufficiently explain the nature of the measure above suggested. nd hoping that similar accounts will be drawn up, of the ertions made in other counties, which it will give me much easure to peruse, I remain,

Gentlemen,

Your very obedient servant,

Thurso, 17. *Sept.* 1801.

A Friend to Public Improvement.

Note of various Measures, calculated for the Improvement of the County of Caithness, carrying on Anno 1801.

Mr HEADRICK, and Mr BUSHBY the Mineralogical Surveyor, have been sent North, by the Barons of Exchequer in Scotland, to bore for Coal at *Scrabster*, in the neighbourhood of *Thurso*, on lands belonging to the Crown, where there is a great probability that a very valuable Mine of Coal will be discovered.

Mr TELFORD, a respectable and intelligent engineer, has received orders from the Treasury, to survey the harbours on the coast of *Caithness*; in particular, those of *Wick*, *Thurso*, and *Dunbeath*; and to estimate the expence of making the same. Some public assistance may be expected for carrying on these important undertakings; in the promotion of which, the DIRECTORS of the BRITISH FISHING SOCIETY, and Mr VANSITTART, Secretary to the Treasury, have much interested themselves.

For the purpose of improving the Fisheries on the coast of *Caithness*, Government has sent north, free from expence, some *Dutch Fishermen*, to be employed in the Herring Fishing at *Wick*.

Mr CHARLES ABERCROMBIE, so celebrated for his skill in lining out roads, has received orders from Lieutenant-General VYSE, authorised for that purpose by Lord PELHAM, Secretary of State for the Home Department, to line out the roads, about the *Ord*, and hills of *Berridale*, and along the borders of *Caithness* and *Sutherland*, so as finally to settle the direction, throughout a tract of

country, which is reckoned the most difficult to make of any in Scotland.

5. Application is made to Government for authority to lay out a sum of money, this year, in making the roads of the County, to be repaid out of the balance of the Forfeited Estates in Scotland; with a view, not only of carrying on so essential an improvement, but also of furnishing a number of industrious labourers with the means of subsistence.

6. A person from PERTH, well acquainted with the LINEN TRADE, has examined, in the course of this year, the advantage which CAITHNESS possesses for carrying on that Manufacture; and has placed them in so striking a point of view, that no doubt is now entertained of its being soon established on a large scale, in the County. Some Flax is already raised, and great quantities of Yarn spun, wove, and bleached, to as great perfection as in any part of Scotland.

7. When the Harbour of DUNBEATH is made, it is proposed to carry on a regular intercourse with the opposite coast of MORAY and BANFF, for the purpose of importing lime from PORTSOY, &c. and for exporting cattle, too large for sending round by the heads of the Friths, or in too good condition to be driven to any great distance, through a rugged country.

8. A number of Farmers from the LOTHIANS, and other Southern Counties, have been examining the Farms in CAITHNESS, where it is supposed that several of them will settle. They have every inducement to do so, as the crops in Caithness were abundant for the two last years, when they failed in so many other districts.

9. ROBERT GERMAN, from the county of Cambridge, has come to Caithness, with the peculiar sort of Ploughs, adapted for trying the Fen Husbandry, as practised in Lincolnshire, Cambridgeshire, &c. This is the most profitable of all farming; producing, at a small expence, great crops of Grain, Grass, Rape, Tares, Turnips, &c. by paring and burning mossy lands, not worth, in their present state, a shilling *per* acre. There is every reason to hope, that this important improvement will answer equal to the most sanguine expectations of those by whom it has been introduced.

10. Mr STEPHENS, junior, proposes being in CAITHNESS in October, to examine to what extent Watering of Land, and

and Draining, can be carried on in the County; that such essential improvements may be pursued, with proper spirit, in the course of next season.

The Resolutions adopted by the Gentlemen of the County, last year, for establishing *Winter Herding*, preventing the casting of Feal and Divot, and including other Branches of Police, have already had so beneficial an effect, that it is resolved to enforce them as much as possible. Indeed, all the intelligent Farmers in the County are so sensible of the advantages resulting from them, that it is hoped no compulsory measures are necessary to insure their observance.

Mr SCOTT, a respectable Builder from Edinburgh, is employed in erecting houses in the New Town of THURSO. He has discovered a very valuable Freestone Quarry in the neighbourhood, which will be of the utmost service in promoting the building of that town; and it may become an article of export to London, and other places, being of an uncommon good quality. The town of Thurso now contains about 2000 inhabitants; and has increased about 400 within the last ten years.

The trees which have been planted in the hilly parts of the County, promising to answer, it is proposed to carry on Plantations there on an extensive scale, and to establish Nurserymen, by whom the Gentlemen of CAITHNESS may be supplied with young trees, accustomed to the soil and climate, and consequently more likely to thrive than any that can be imported.

Some promising veins of COPPER, and of LEAD ORE, and specimens of the most beautiful MARBLE, having been discovered in different parts of *Caithness*, Mr HUTCHINSON, of Alstonmoor, in Cumberland, came north to examine them; and is so much pleased with their appearance, that he intends, in conjunction with his friends, to establish a Company for working such as are likely to be the most productive and valuable.

The introduction of the CHEVIOT BREED of SHEEP has succeeded so completely, that it is proposed to increase them considerably. The flock of one proprietor already amounts to between 3000 and 4000; and he proposes augmenting the number to 10,000, which will probably be the largest flock, of so valuable a sort, in the island. Materials will thus be furnished for the

establishment of a Woollen Manufacture, which has been long much wished for.

16. Though SHEEP must be the staple article in the hilly districts, yet CATTLE ought to be principally attended to in the plain country, until there is a market for considerable numbers of fat Sheep. The Cattle of *Caithness* are much improving in quality, particularly those which have been crossed with the *Galloway Breed*. In order to accommodate the Drovers, who may wish to purchase them, and that the Cattle may be brought to their proper value, it is proposed to hold stated Fairs, in the beginning of the months of June, August, and September, which several considerable dealers have already engaged to attend.

17. A regular and frequent communication with other places, is essential to the improvement of any district. To obtain that advantage for *Caithness*, it is necessary that a Daily Post should be established to the two principal towns; and it is to be hoped, that an intended application to the Postmaster General for that purpose, will be successful. It is further proposed, to have packets or vessels, that will sail, at fixed periods, from *Leith* to the towns of *Wick* and *Thurso*; and also to carry on an intercourse with the Metropolis, by means of the fishing smacks which supply the London markets with Cod and other Fish, and which rendezvous, for several months in the year, at *Scrabster Road*, near *Thurso*.

18. Instead of applying, either to Courts of Law, or to Parliament, for authority to DIVIDE the COMMONS, it is not unusual, at present, to refer the same to the decision of one or more Gentlemen of the County, who are not interested in the division; and so much are the Proprietors, in general, disposed to promote such measures, that a favourite toast here is likely soon to be realized—"May a *Common* be an *uncommon* spectacle in CAITHNESS."

19. The late Scarcities have pointed out the necessity of improving the Agriculture, and extending the Cultivation of the Kingdom. In regard to the latter point, there is every reason to hope, that the County of CAITHNESS will not be deficient. A great extent of *Waste Lands* have been improved, this year, in various parts of the district; and the crops promise amply to repay the expence,

pence, more especially on *Mossy Lands*. The spirit of inclosing and cultivating Wastes is now so prevalent, that one Gentleman has pledged himself, that he and his tenants shall improve *Five Hundred Acres* in the course of next year; and *a Subscription Paper* is proposed, to ascertain the quantity which the different Proprietors of the County will undertake to improve, in the course of next season.

As EDUCATION is the basis of all permanent improvement, it is intended, immediately, to erect an ACADEMY at THURSO, where all the principal branches of education will be taught by proper masters. A BOARDING SCHOOL for Girls has already been established there, and is conducted much to the satisfaction of the Town and Neighbourhood; and as THURSO will soon rival, in regard to the important article of Education, any town of its extent in Scotland, that, joined to the Cheapness of Provisions, and other conveniences, must be a great inducement to persons of moderate income to settle there.

t will appear, from the preceding enumeration, what a iety of important Improvements are now carrying on in ITHNESS, which the late favourable seasons, and the high ce of the articles which the country produces, have great tended to promote. In the course of last Spring, and mmer, from 400 to 500 labourers came in from the neighring Counties in quest of work; and hitherto they have found occupation in Building, Inclosing, Ditching, Trench, Roadmaking, and other substantial improvements. Ind, such has been the happy situation of CAITHNESS, dur seasons which have unfortunately borne so hard on other ces, that no person, either living in it, or who chose to ne into it from any of the neighbouring Districts, have the want, either of food or employment.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Obstacles to the Cultivation of Waste Lands, and the Best Means of Removing them.

NTLEMEN,

AMONG the variety of useful matters treated of in the pro-ss of your work, I perceive many powerful arguments for the

the cultivation of waste lands. This subject has been so fully discussed by several able writers, that it is hardly possible to offer any thing new upon it. Yet it must appear surprising, that, while this country has been so frequently threatened with all the horrors of famine, no general nor effectual measures have been adopted, to remove the obstructions which stand in the way of improving waste lands. This must, in part, be ascribed to the nature of our Government, which is founded on the principle, that all private property, from that of the meanest cottager to the highest Peer, is sacred and inviolable; a principle which forms the bond of union in every well ordered community, but which, in matters of this sort, renders the Government averse from adopting any general regulations, without the concurrence of the parties interested.

That individual parties, as well as the public at large, are deeply interested in reducing all common and intermixed possessions into severalty, is a proposition so evident, that it requires no illustration. Without this, improvement is not only difficult, but impossible. Another step, of great importance for the general improvement of the country, would be, to reduce all public burdens, which affect land, to a known and fixed standard; so that the tenant, or cultivator, might know his situation, and the exact amount of his rent. A public burden, which operates as a tax upon the increased produce of land, operates also as an effectual bar to its improvement.

Evident as these propositions appear in this part of the island, it has been found extremely difficult to reconcile the many jarring interests among our Southern neighbours, so as to carry them into effect. On the one hand, the poor, who have established a right over commons, or a property in small intermixed patches of land, always look towards a general division with an evil eye. Though they derive very little benefit from their present mode of occupancy, that little is got without much labour, or expenditure of capital. They are much attached to old usages, which, however useful, or even of absolute necessity, at the commencement of agriculture, are utterly incompatible with its present advanced state. They regard every scheme of division as operating in favour of the rich, and against their interests; because, though their share should be fairly allotted to them, they are incapable of making an advantageous use of it, from want of capital to construct the necessary buildings, to make drains and

and fences, and to purchase seed and manures. These circumstances occasion many difficulties in reconciling the interests, and even prejudices, of this numerous class of men, with any scheme of general division. But, though the difficulties are great, it is hoped they are not insurmountable, but such as a wise and enlightened Legislature may remove.

Another great obstacle to the reduction of common and intermixed lands into severalty, arises from the difficulty of adjusting the claims of the lords of manors, and of the clergy, or those who have a right to the tithes. The latter, especially, often discover a degree of irritability at the mention of this subject, and are apt to raise a cry, that the Church is in danger.

No wise or just man would countenance a measure, whose effect would be, a violation of the rights of any individuals, or class of men. In this case, it is not proposed to extinguish any man's right, but merely to change the mode by which it is exercised, so that it may not operate as a bar to improvement. The payment of rent by the farmer, for the land he occupies, cannot be considered as an obstacle to improvement; on the contrary, it operates as a stimulus to his exertions, because he knows, that all he can acquire beyond the rent is his own. The rent is also fixed by a voluntary agreement between the farmer and his landlord; and the former has no reason to complain, that, by entering into a farm, he has been surprised into engagements, the nature and extent of which he had neither foreseen nor appreciated. Hence, all services in place of rent and tithes, as their value and amount must be always uncertain, and inconsistent with the industry of the farmer, should be commuted into a rent that is known and fixed.

In Scotland, it has been ascertained, and received as a maxim, even in legal proceedings, that a fifth of the rent is a fair and just equivalent for the tithe, or tenth part of the produce of the land. Were some such commutation established in the South, the farmer would know exactly the footing on which he stood, because he would know, that whatever rent he had agreed to pay to his landlord, he was bound to pay a fifth part more, or any other proportion that might be settled, to the Church, or proprietor of the tithe. This would extinguish all seeds of dissension between the parties; the rents, and consequently the commutation for the tithes, would soon be increased far beyond their present amount; while the farmer would reap the full fruits of his

ingenuity and industry, in increasing the produce of his farm. I cannot see how the Church would be endangered, by a measure which is likely to increase her revenue, and that revenue, too, levied without either trouble or expence. Those who are apt to raise this cry, have an example before their eyes of King Charles I., who was certainly no enemy to the Church; and yet, by his award, he fixed a similar commutation for tithes in Scotland; a commutation which has given universal satisfaction to all the parties interested.

But, without entering minutely into a subject, which probably we, in this northern part of the kingdom, do not fully understand, I shall content myself with suggesting a few arrangements, which may facilitate the cultivation of waste lands among ourselves.

In many parts of the Highlands, and Isles of Scotland, the cultivated land is still occupied in *run-rig*, or *rig and rennel*, as it is called in some places. The waste, or pasture land, is grazed in common, by the cattle of the several tenants who are concerned in the cultivation of what is in crop. Nay, in some places, not only different ridges, or patches, are cultivated by different people, but the same ridge, or patch, is often divided among from twelve to twenty people, who cultivate the several parts of it. In some cases, these patches are changed every year; and, in most cases, they are changed every third year: so that every individual of the society comes, by rotation, to the possession of these several patches. This *societas orandi*, or cultivation by united efforts, is the plan that occurs to every rude people, when they first begin to cultivate the earth: but it is utterly incompatible with an improved system of agriculture; and, while it continues, must confine this most important art to its first and rudest efforts. It is a genuine exemplification of the system of equality, so much talked of; for it effectually disqualifies any individual from rendering his situation better than that of his neighbour's, by superior ingenuity and industry. All the members of such societies are perpetually equal; but the equality consists in laziness, poverty, and wretchedness. Happily, it is in the power of proprietors themselves to remedy these evils, by letting out farms in a proper manner; constructing suitable farm-offices; and assigning to each individual the tract which he is to occupy.

In the county of Caithness, which is fast rising into importance as an agricultural district, and in some other places, much

much of the cultivated land is not only occupied in run-rig by several cultivators, but there are large tracts, frequently of the best soil in the district, which are common to different properties. The effect of this is, that the tenants, all round these commons, are tempted to keep a larger stock of cattle than they can subsist during Winter. The animals are half starved in Summer; and, in Winter, they either perish, or are reduced to a very inferior value. They also impel the tenants to the hurtful practice, of paring turf from the commons, to be used as manure for the cultivated land: by which the latter is injured, from a too great accumulation of moorish soil; while the unfortunate waste lands are subjected to the martyrdom of St Bartholemew, in being flay'd alive.

From your Work, I perceive the gentlemen of Caithness have adopted measures for preventing the destruction of their waste lands, by this pernicious practice of flaying, or paring turf. But all their measures will prove ineffectual, unless the commons are divided, and rendered individual property. Indeed, unless property, and occupancy of land of every species, whether by proprietors or tenants, be reduced into severalty, it is vain to look for improvements. Happily, in this country, lands that are common to different properties may be divided, by an amicable arrangement among the proprietors themselves; and they can then proceed to allot the lands, so divided among their tenants, in the way that may be found most convenient.

The practice of entailing, which has been carried to a great excess in Scotland, operates as a powerful obstacle to the improvement of land. It reduces a proprietor, or rather manager of an estate, to the condition of an annuitant: who has no power of controuling those circumstances by which his situation, and that of those who are under his direction, may be meliorated. If the occupant of an entail has a family, the estate goes to one; and he is impelled, by irresistible necessity, to save all he can, with a view to provide for the younger branches of his family. If he has no children of his own, the estate descends, perhaps, to some person with whom he has no natural connexion: And he has no inducements to labour, or to expend money in improvements, of which another is to reap the fruits.

With an absurdity altogether preposterous, many of these entailers have presumed to limit, if not extinguish, the power

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of their successors to grant leases; and, in many cases, have tied them down to that system of management which appeared to them the best when the entail was executed. Thus are the modes and practises of rude and ignorant times perpetuated, and large tracts of improveable land consigned to barbarism. On this point, legislative interference would be necessary: and it would certainly contribute to the improvement of the country, to permit the occupants of entails to grant such leases, and to make such alterations in their system of husbandry, as could be proved to be manifestly for the advantage, not only of themselves, but of their successors.

The services which are still paid, in many districts, in place of rent, divert the farmer's attention from his proper business, and operate as a bar to improvement. Landlords have been much cried out against, for continuing these services; but unjustly. They arose out of the state of society in remote times: and where that state continues, they can hardly be dispensed with. In districts where every individual is a farmer, no man will work for wages: and a proprietor has no choice, but to stipulate with his tenants to perform any extra work that may be necessary for his accommodation, and which may exceed the power of his ordinary domestics to execute.

But, in districts where all are farmers, there is seldom any good farming. Were good roads constructed, and the condition of many of these small farmers changed into that of day-labourers and tradesmen, their condition would be much more comfortable than it is at present; and their work, under the direction of skilful farmers, would be much more productive, than in its present desultory and confused mode of exercise. Landlords would soon find their advantage in converting all these services into a fixed rent; because they could always procure enough of labourers, not only for their ordinary work, but also for any extraneous exertions which their accommodation might require. These services are much more hostile to the true interests of landlords, than to that of their tenants; but there are some situations which leave them no choice.

Thirlage to mills is a grievance which has long fettered agricultural exertion, in many districts of Scotland. But as this is likely to be abolished, or at least very much alleviated, in consequence of a late act of Parliament, it is unnecessary to trouble you with any remarks upon it.

I have thus thrown out, in a very desultory manner, my opinion of the steps necessary to be taken, both on the part of the Legislature, and of many individual proprietors, with a view to render the improvement of lands already cultivated, and the reduction of waste lands into cultivation, practicable, or possible. We must not look for any permanent relief from the pressure of our present difficulties, from great crops in this or that country, beyond seas; but from increasing the amount of our agricultural produce, by introducing a more efficient system of cultivation into some districts, and enlarging the extent of productive surface in all. Having detailed the previous steps towards accomplishing this object, I beg leave farther to suggest,

That I conceive, in times such as these, our Legislators should not confine their exertions within the simple removal of obstructions to cultivation; but should exhibit some direct stimulus to the improvement of waste land.

For several years past, the people of this country have been paying at the rate of from four to seven millions annually for foreign corn. This is so much of the national wealth wasted, or extinguished, for ever. It has gone to stimulate the agriculture of nations who have shewn dispositions, not very friendly, towards us. Had it been laid out in the improvement of our own lands, it would have produced a much more ample supply of food, and laid the foundation of future increase in wealth and population.

Suppose, then, the experiment were tried, of laying out only a small portion of the money, which is annually drained from the country, for foreign corn, in the way of premiums for the cultivation of waste land:—I cannot foresee any evil that could possibly result from this project; and it is likely to be productive of the best effects.

The following is the mode in which I conceive the premiums might be distributed:

1. For every Scottish acre that is gained, by draining lakes, swamps, or by embanking out the sea; or, that is cleared of stones or brushwood; or, that is reclaimed from moss or moor; and is afterwards so far improved, as to produce not less than 4 bolls (Linlithgowshire measure) of any species of corn or pulse - - - L.2 0 0
2. For every such acre that is so far improved as to produce not less than 25 bolls of potatoes - 2 0 0
3. For every such acre so far improved as to pro-

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duce not less than 7 tons of turnips, cabbages, or other green crop, - - - - L. 2 0 0

4. For every such acre that is made to carry not less than 100 stones of good hay - - 2 0 0

I assume our Scottish measures, as I am best acquainted with them; but your ingenious readers can easily transfer them into any other standard. I also state the produce, entitled to a premium, much lower than the average which waste lands, after one or two years culture, will actually yield. This is done, that those who have a more obdurate soil to work upon, or are situated in a more ungenial climate, may not be discouraged from making the attempt. It is also meant that every competitor, on announcing his intentions to the Justices of the district, shall be allowed four years from the commencement of his operations; and that he may claim the premium, during any of these years that may seem most advantageous to him.

Having detailed the outlines of our plan, let us examine its effect in raising a supply for national consumption. Suppose two millions should be annually distributed in premiums for corn raised on lands formerly waste; this will add, at least, one million of acres to the cultivated and productive surface of the island;—of much more value to Britain than a distant province, acquired by conquest. Deducting one million of bolls for seed, it will also add not less than three millions of bolls of corn to our fund of national subsistence. These, if imported from foreign countries, would cost not less than six millions of our national capital, extinguished for ever. Hence, by carrying this plan into execution, the public, or nation at large, would save not less than four millions *per annum*; and this, too, without any extinction of capital; but rather by diverting part of her capital into a channel, where it would be perpetually receiving an increase of value.

The only objection I can foresee, as likely to be urged against the vigorous cultivation of waste lands, is, that by diverting seed and manures into such lands, a temporary scarcity may be produced, instead of plenty.

So far as seed is concerned, the objection applies equally to lands already cultivated. Though corn is very scarce and dear this season, I hope none of our farmers have withheld a due proportion of seed for a future crop.

With respect to manures, it is meant, that all competitors for premiums shall be obliged to begin their operations with calcareous,

calcareous, or other mineral manures, if they be within their reach. These will meliorate the land so far, that it will yield putrescent manures, from the straw, and other produce. Thus, there will be very little diversion of the present stock of putrescent manures, from the lands already under crop.

I have thus suggested what appear to me the most likely means of raising a sufficient supply of land produce, for all our national wants. While a single acre remains unproductive, it is a shame that so mighty a nation a Britain should be obliged to truckle to foreign powers for her daily bread; and meanly to scramble for the crumbs that are scattered by a cautious, perhaps, insulting hand. Let her look homewards, and she will find all her wants amply supplied from her own exertions.

19th May 1801. RUSTICUS JUNIOR.

Note.

The Conductors are much obliged to the gentleman who favoured them with the above observations, and solicit a continuance of his correspondence.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Observations on the Use of Lime.

GENTLEMEN,

In perusing your 5th Number, I observe an inquiry made by a correspondent, as to the effects of lime on different soils, and the best mode of using it Having practised the Lime Husbandry in different parts of the kingdom, and thought a good deal upon the subject, I take the liberty of offering such observations as have occured to me, which, though you will receive them in a plain dress, have facts and experience to recommend them to your notice.

All soils, without exception, are benefited by lime, provided due attention is paid to the mode of using it, and the course of cropping afterwards followed, which, in every instance, ought to be gentle; for, whoever expects that land, after the application of lime, will bear a succession of exhausting

hausting crops, without injury, will to a certainty meet with disappointment. It is not my purpose to enter into any chemical disquisition on the qualities of lime, a task greatly beyond my knowledge, and which has already been handled by men better qualified for it. Indeed, I am the less inclined to do so, from a conviction, that the generality of husbandmen will reap more benefit from a few practical hints, conveyed in plain language, than from a thousand volumes filled with theory and technical language.

I begin, first, by stating, that lime does not, in its own composition, contain any fertilizing principle, but is useful only by its operation upon substances really fertilizing, which it meets with in the soil, and which, without its operation, would remain in a dormant state; for, though it is perfectly certain, that lime has the power of attracting much, both from the earth and the atmosphere, it does not follow, that any of its own component parts, or, indeed, any thing it attracts or collects by its powers, will, of themselves, be food for plants. It is the effect produced upon these by lime, that renders them useful; and, from their decomposition, and the new combinations formed, the benefit results. Without such combination, they would remain dormant; and the lime, in place of being useful, would prove injurious.

Taking this for granted, it is incumbent upon every person using lime, to ascertain, with strict precision, the purpose he intends it to answer; whether, as upon strong wet clay, it is applied with a view to break the cohesion of the soil, and open it in such a manner as to allow the roots of the plants to take as wide a range as possible, in search of food, and, at the same time, sweeten and correct the acidity so prevalent in such soils. In those cases, a good dressing should be given at once, and such as to prevent the necessity of a repetition for many years.

Upon strong, deep, moist, loamy soils, where it is intended to put in action the latent principles they contain, most of which are found to consist of animal and undecayed vegetable substances, lime produces the most surprising effects, provided a judicious rotation of alternate white and green crops is followed. Such soils, after the application of lime, will produce bulky and valuable crops with a much smaller proportion of dung, than if no lime had been applied, owing evidently to the active powers of the lime prevading the dung and rendering every particle of it useful.

Upon

Upon poor, weak, weeping clays, where, owing to the quantity of acid and ferruginous particles, the dung is locked up, and prevented from exerting itself, the application of lime is equally salutary, by separating the acid from the iron, putting the vegetable matters into a state of activity, and opening the soil, in such a manner as to afford free scope for the roots to extend and stretch themselves out in every direction. Such lands, if they are dunged and laid into grass, immediately after the lime is applied, will have their value greatly increased, especially if due pains are taken to crop moderately, when they are afterwards broke up. In every instance, hard cropping after lime is hurtful; but, upon soils of this description, it is ruinous.

Upon deep, dry, loamy soils, where the principles of fertility are abundant, and which contain, within themselves, that happy mixture of stimulating and enriching materials, lime appears less necessary than upon almost any other soil. Such lands, if kept clean, and a proper rotation followed, will produce excellent crops, by the application of dung only.—Lime, however, in small quantities, will be useful after every second dunging, and will effectually operate upon, and bring into activity, such parts of the manure as would otherwise have remained in a dormant state; for, whether it is owing to an imperfect fermentation, or to whatever cause, it is certain that a considerable proportion of all the dung applied to land remains in an inactive state, owing evidently to the want of alkaline, or calcareous matter, to operate upon it.

Upon light sandy soils, which are seldom known to abound very much with vegetable matter, lime is useful, in a double sense: First, by acting upon the decayed vegetables it meets with; and, next, by the decomposition of shells, decayed gravel, &c.; which, by moulding down into earth, thicken the staple of the land, and form a soil much less liable to be hurt by drought, or indeed any accident by which crops are generally injured. Having little moisture in itself, the lime readily attracts it from the atmosphere; which accounts for its resisting dry weather.

Upon soft, black, moorish soils, which certainly are the most worthless of any with which we are acquainted, the application of lime, and the after treatment, requires the greatest care. In no instance ought the dressing to be heavy: as the materials upon which it is to operate are scanty, perhaps 30 bolls per acre is as much as should be ventured upon at

at first; and, if there is an opportunity of bestowing top dressings, of good earth, or compost, afterwards, and the land allowed to remain in grass for a series of years, a greater proportion of lime may be afterwards applied, with advantage; as a considerable quantity of vegetable matter will, by that time, be accumulated, upon which it will exert itself. But, in this, as well as the first stage of liming such soils, the cropping should be carefully managed, and the land returned to grass as soon as possible.

To point out the effects of lime, and the quantity required, upon every gradation of soil, would greatly exceed the limits of a paper such as this; but, if the hints now offered meet with your approbation, and are deemed worthy of a place in your Magazine, I will send you the remainder of my observations, for insertion in your next Number. Meantime, I am, very respectfully, Gentlemen, yours,

P.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On the Use of Lime, and the Management of Dung.

GENTLEMEN,

IN your Magazine, No. 6. your correspondent, who calls himself a Novice, desires to know the experiments on the best methods of applying lime. By your note to him, you consider him as taking an affected signature; but your reason for this conclusion is not so obvious, from any thing that either party has advanced. I also am a novice, and desirous of your answer.

The Novice's second query, I am sure, in appearance, disguises no superior skill; when he says, he is at a loss how lime, if it be perfectly effete before sowing turnips, can conduce to the benefit of the crop, or even of the ground. I presume *effete* lime, means lime that has reabsorbed its fixed air that was expelled by burning; that is, effete lime, is simply lime that is not quick lime. Considerable doubts have arisen amongst farmers, whether lime should be applied, in general, *hot or effete*, and which is most beneficial to the crop and ground; of which the Novice does not seem aware: And, as I am inclined to think, that all lime spread on

the

ground, becomes almost instantly effete, I shall be glad to your opinion on this question.

s to the Novice's other questions, whether it is service- to mix up stable dung with earth? and, whether it should uch rotted when laid on the lands? I humbly presume fer him to an essay on that subject, by Dr Fenwick of ham. His concluding words are—" If we can bring the which arise from our dung hills into close contact with we may reasonably suppose, that no inconsiderable por- of them will be retained by it. For this purpose, let a on of surface-soil, or any light earth, be strewed, as as may be, on the dung-hill; if the quantity thrown on ot too large, it will not check the putrefaction. After a , let this soil be mixed with the dung; or, if the ferment- should not be active, let it be thrown off, and heaped eside it, and then another portion laid on the dung at : Thus, by degrees, we shall form the most valuable rials for composts; and profit by those active principles, h are, in the present practice, inconsiderately wasted.— earth will answer better than any other, for this pur- both as the lightest, and as it abounds in vegetable mat- which, under this treatment, will be converted into a va- e manure."

e adds—" It is worth inquiring, how far it is necessary ung to be in so advanced a stage of putrefaction before se it. I have already observed, that, if it be ploughed in- nd before its fermentation is somewhat advanced, the pro- will be stopped; but, when it has once pervaded the completely, we may mingle it with the soil, without uch effect: and I have the authority of one of our most igent and experienced farmers, for asserting, that half- l litter is best."

ave only to add, that light earth is also very valuable, mixed with dung, for the purpose of absorbing the mois- of the dung-hill, that otherwise might be lost.

NOVICE JUNIOR.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Observations on the Cultivation of Potatoes.

GENTLEMEN,

HAVING long entertained an idea, that the formation of apples upon potatoes was detrimental to the crop, by drawing away a large and valuable part of the nourishment from the roots; I, this year, made an experiment, which, I think, goes a great way to solve the question. Having planted some acres of different kinds, I had the flowers carefully picked from several of the drills, as soon as they appeared; leaving between every drill, so picked, a drill with the flowers untouched. In some cases, I allowed the flowers to expand, and even to make some progress towards setting; in others, I suffered the apples to form, and pulled them off when they were half grown. The following is the result:

In the drills, where the flowers were gathered as soon as they appeared, the crop was, in most instances, nearly double what it was where the apples were allowed to come to maturity. Where the flowers were allowed to waste themselves, the crop was less abundant; and where the apples had made some progress, it was still less, though greatly better than where they had been left untouched. In short, from the time of the flowers appearing, and as long as the leaves continued green, and the stems growing, there appeared an advantage, from gathering both the flowers and apples; gradually diminishing, however, as they approached the ultimate period of their growth. I remarked also, that the stems of the potatoes, in the drills where the flowers had been picked off, continued green and vigorous, much longer than where they were suffered to grow; and also, where the apples were gathered at an early period. I, at the same time, made trials as to the effects of cutting the haum, or shaw, as it is commonly called in Scotland, at different stages of its growth; all of which I found ruinous; the deficiency of the crop being in exact proportion to the earliness of the cutting; with this addition, that the potatoes were ill ripened, and of a very bad quality; while those adjoining, where the haum had been left, were excellent. I also made a careful trial as to the advantage of drawing up the earth to the stems; which I found greatly superior to the practice followed by some, of only

only clearing away the weeds, without giving them any earth at all. In this last case, I found the crop not only less abundant, but a great part of the potatoes, by being so near the surface, were without a covering, and, by being exposed to the depredations of vermin and the weather, quite spoiled. From trials, I also found, that no benefit arises from very early planting, especially of the late kinds; as, however early they may be put into the ground, they do not vegetate till a certain period; and, in the mean time, are exposed to every injury arising from frosty or wet weather, which frequently happens in the Spring. I, this year, planted some of the late kinds in the beginning of July; and, a few days since, raised a crop from them, no way inferior to that obtained from those planted in February. While I mention this circumstance, I think it of consequence to state, that all the different kinds, both of early and late potatoes, may be rendered, at least, a month earlier, by a very simple process, namely, that of putting them in a warm place early in the Spring, allowing the shoots to grow an inch or two, and afterwards planting them out, leaving the top of the shoot nearly upon the surface. By this management, I have frequently had a good crop of potatoes, a month or five weeks earlier than I could have otherwise obtained it from the same kinds, without such attention.

In conclusion, I beg leave to mention a circumstance, which I consider of much importance to those who wish to raise new kinds from the apple. In the ordinary way, it is three years before potatoes can be obtained of any tolerable size; a fourth year is required to ascertain their properties. A trial which I have made, convinces me, that new kinds may be obtained from the apple much sooner, and every property they possess completely ascertained the first year. It consists in gathering the apples early in the season, hanging them in a dry place till New Year, and then rubbing them to pieces with fine dry sand, after which they may be sown in a hotbed, or in a box placed upon warm dung. As soon as they have put out the rough leaf, they should be transplanted in drills, richly dunged, and put pretty deep into the earth, leaving only the top uncovered. Where this is done at an early period of the season, the crop will be considerable; and every property, possessed by the different kinds, ascertained the first year. I am, Gentlemen, your's, &c.

A. Z.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

On Mr Elkington's Method of Draining.

GENTLEMEN,

THE benefit arising from draining, whether by carrying away surface-water, or freeing the land from spouts, occasioned by water bursting out from higher grounds, is so great, as to require no encomium of mine. The purpose of the present communication is, simply to mention, that a Mr Johnstone, a countryman of our own, was a considerable time in England with the celebrated Mr Elkington, by whom he was instructed in the mode of draining, which obtained the sanction of the Board of Agriculture, and both Houses of Parliament, and for which Mr Elkington received a public remuneration. Mr Johnstone has published a very intelligent work upon the subject, well worth the attention of proprietors and farmers, especially in upland situations, where the land, from its great inclination, is incumbered with spouts, to which Mr Elkington's mode of draining is peculiarly adapted. As Mr Johnstone possesses very considerable merit, and no small degree of knowledge in other branches of rural science, and as the work above mentioned is of high importance to agriculture, I hope you will have the goodness to give this a place in your Magazine. While I make this request, I can, at the same time, assure you, that I have no other interest in its success, than what arises from a wish to make a work, of such obvious utility, as extensively known as possible. Mr Johnstone will be heard of, by applying to Mr Constable, or any of the principal booksellers in Edinburgh.

I am, Gentlemen,

A Friend to Merit.

Note.

The Conductors, having perused the work now mentioned, have much pleasure in being able to add their approbation to that of the writer of this letter, and in recommending it to the attention of all proprietors and farmers.

TO

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Proposal of a Canal in the Stewartry of Kirkcudbright.

GENTLEMEN,

THE following observations on a Navigable Canal in the stewartry of Kirkcudbright, are taken from a paper given in to the Glenkens, or New Galloway, Farming Society Should they appear consistent with the plan of your Publication, you may insert them; as they will, in this way, not only reach the persons most interested, but obtain that consideration from the public, which an object of that importance requires.

N. G. 1st June 1801. A. M.

'A Canal, from a lake at Carlinwark, beside Castle-Douglas, to a lake upon Kenn, was many years ago made, at the expence of Sir Alexander Gordon of Culvennan, the lake at Carlinwark containing an almost inexhaustible quantity of marl. Through this channel, marl was sometimes brought as far as New Galloway. In the present improved state of the roads, English lime is brought, in carts, into the Glenkens district of the stewartry, from Tungland, at the head of the Bay of Kirkcudbright, about nineteen miles below new Galloway; or from Barjarg, in Dumfriesshire; or Keirs, or Lanehead, in Ayrshire; at nearly equal distances. It was in speculation, about fourteen years ago, to have enlarged the above Canal, from the lake upon Kenn to Carlinwark, and to have continued it thence to the sea, at the Bay of Heston, near Orchardton, in the parish of Rerrick, about six miles; the country, on this line, being very level, except one small rise: as it would yield a very great return, from bringing lime and coals by water carriage to the head of the lake upon Kenn, and give a more ready and cheap vent to the bulky articles of the produce of the country. The expence was estimated at little more than 10,000l.; but, although it is believed it would pay upwards of 25 per cent. yearly, subscribers could not be found to run the hazard.

Since the year 1780, a great deal has been done to the highways in this district; a sum of 3000l., and upwards, having been expended, in consequence of an act of Parliament

passed in that year, for the conversion of the statute labour into money; and, by another act, passed in 1796, the trustees were entitled to increase the assessment to a certain extent, and erect turnpikes. The Canal would therefore be attended with advantages, of carriage to and from it, exceedingly beyond what it had when first proposed.

Among other articles which might be brought into the district, at a cheaper rate, beside lime and coal, (of which the stewartry does not produce any), are, tar, iron, groceries, and merchant goods of all sorts furniture, foreign wood, and slates for houses and shades for cattle, (thatching with straw being an incalculable waste of food and litter). Among those which might be carried out of it, are, betwixt seven and eight hundred packs of wool, from four parishes, and a good deal from others; a quantity of oak, ash, elm, plane-tree, &c. from the woods here, at present of little value, except the oak, on account of the bark; the surplus of the grain also, raised by the lime brought in, would find vent; and even potatoes, of little use in ordinary seasons, except for home consumption.

To give some idea of the advantage that would arise from the Canal, take the profit on the land, considered singly.—Thus, if 6 miles in breadth, and 14 in length, or 42,000 Scots acres, on the sides of the Canal, were benefited only 2s. 6d. per acre, for tillage or pasturage, the yearly profit from thence would be 5250l.; which, allowing the expence of the Canal to be 15,000l., would be repaying it in less than three years; and this is confining the advantages to one article, and to three miles distance on each side of the Canal; whereas, they would extend to five times that distance, in a lesser degree.

This is an improvement only in the power of the wealthy proprietors in the district; but there are so many of these, and so opulent, it is matter of surprise it has not been already made.

A. M.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Hints of Management, tending to Obviate the Effects of Severe Drought.

GENTLEMEN,

As the effects of severe drought are chiefly felt upon soft light soils, I beg leave, through the channel of your Magazine,

zine, to communicate a hint, which, if properly attended to, may be useful to those possessing or occupying property in such situations. Early in the season, I was struck with the benefit that attended the earthing up of some plants of wheat and oats in my garden, which continued growing vigorously during the whole of the dry weather. I made the same observation, in a very light, dry part of a field which I had rolled, to consolidate the soil, and enable it to resist the drought, in different parts of which, where the roller had turned, and, by heaping up the soil, almost buried a part of the plants, they afterwards sprung up, and put out stems as strong as reeds, with a great number of offsets, and a large ear; while those, immediately adjoining, were very small and stinted. Improving upon the hint, I (with my foot) hoed a few yards square, into drills about ten inches separate, drew up the earth to the roots of the plants, and pressed it well down. The result was very satisfactory. The plants throve from the day they were earthed up, grew very strong, and, though hoed into drills ten inches apart, yielded more than three times the produce of the rest of that part of the field. I have long imagined, that our broad-cast crops either failed, or were less productive, owing to their not having a sufficient establishment in the soil, especially upon light dry lands, of which I think the above is a tolerable proof. Would not the ploughing in of the seed be attended with benefit upon such soils? And would it not equally prevent the mischief arising from Spring frosts, and dry Summers, especially with wheat and barley crops? I am, Gentlemen, yours, A. Z.

FOR THE FARMER'S MAGAZINE.

Sketch of a Tour through the Northern Counties of Scotland, by a Farmer.

PART IV.

(Continued from page 294.)

INVERNESS is a place of considerable importance, enjoying many local advantages, and occupied by people who are active and industrious. It is situated upon the river *Ness*, over which a stone bridge was erected in 1688, affording

communication with the Western and Northern districts. Several manufactures are carried on here, particularly one for weaving hempen stuffs. The first charter of the town was granted by Malcolm Canmore, in the eleventh century; which was confirmed and enlarged by future monarchs; the inhabitants always remaining steady in their attachment to the Crown, in opposition to the unbridled licentiousness which anciently prevailed among the neighbouring chieftains.

The soil, in the immediate vicinity of the town, is naturally of a good quality, and artificially enriched by the great quantity of manure, gathered, for ages, in such a populous place. Land-rent is very high, we mean, within two or three miles of the place; nor is this to be wondered at, as the value of the produce is not much below the rates of the metropolis. We saw excellent turnips; fine fields of clover and rye-grass; and, in short, except in the article of wheat, which is not extensively sown, the several crops appeared rather superior to any we had seen, northward of the Forth, excepting those in the Carse of Gowrie and Banffshire.

After seeing every thing worthy of observation at Inverness, we proceeded up the *Aird*, through Lovat's country, which afforded us a most delightful excursion. The land upon Beaulieu Frith is of a rich quality, much of it a heavy loam, (a rare variety in the North of Scotland), and the management considerably above mediocrity. We heard of one gentleman, who had raised an extraordinary crop of wheat some years ago; but as the quantity per acre is not noted in our journal, we forbear quoting the bolls from memory, though we believe it was equal to the crop cultivated by Mr Yelverton, for which a premium was obtained from the Dublin Society. We formed a high opinion of the Aird; and if the climate be not backward, it is in other respects calculated for producing every kind of crop, whether culmiferous or leguminous.

Returned to the neighbourhood of Inverness, in company with a gentleman, who favoured us with many instances of attention and civility, and afterwards accompanied us through part of Ross-shire. At his house we met with the poet-laureat of the Inverness volunteers, who styled himself the *Laughmeclaughan Bard*, and were favoured with various specimens of his poetical talents, which afforded us much entertainment.

Crossed

Crossed the Frith at *Kessock Ferry*, but experienced a disagreeable passage. Once for all, it may be remarked, that, having so many ferries to pass, is not the most agreeable circumstance attending a Northern tour; for the boats are bad, being chiefly old craft, while the ferries are not under the best regulations, some of them under none at all. The high hills adjoining, often occasion sudden gusts of wind, which render passages very dangerous; however, we got over safe, though, from the smallness of the boat, we could not cross all at once; consequently, were detained a considerable time on the opposite shore.

The first thing we noticed, upon landing at Kessock, was barley in the stook, though the season was no farther advanced than the first week of August, which was a sure proof of the dryness of the soil, and earliness of the climate. Proceeded to Allangrange, the seat of Mr M'K—, to whom we were recommended; but, unluckily, that gentleman was from home, which we considered as an unfortunate circumstance. The land from Kessock to Allangrange, is mostly in its natural state; but seems capable of receiving considerable improvement. At Allangrange, we found the fields carrying crops equal to those got in the best cultivated counties. The Summer fallow was well wrought; turnips were excellent, and nicely handled; and, in short, every operation executed in a most husbandmanlike style. Two young gentlemen, friends of Mr M'K—'s, kindly shewed us the whole of his farm; and, if the absence of that gentleman could have been compensated, the politeness displayed by them and Mrs M'K— would certainly have made it up.

To *Dingwall*, 9 miles. Much of the land through which we passed, is of moorish quality; but, upon the Conan Water, the soil is good, particularly as we approached the burgh of Dingwall. Up Strath Peffer, the soil is mostly clay, and heavy loam upon a moist bottom. Barley and oats are the grains chiefly sown; though we saw some excellent pease, a grain not frequently sown in the Northern districts. Indeed, the ground appeared capable of carrying every kind of corn crop, if a suitable arrangement was made, which, at present, is not the case. Some South-country farmers have lately settled in the neighbourhood, who, it is to be hoped, will produce the wished-for change.

Dingwall is a small Royal burgh, situated at the head of the Cromarty Frith, and nearly in the centre of Ross-shire; though Tain, which is in East Ross, is the county town, where

where public business is transacted. This place is of great antiquity, its original charter being granted by Alexander II. in the thirteenth century; and here the potent Earls of Ross, who lorded over all the adjoining country in ancient times, had their principal residence. A small retail trade to the inland parts, constitutes almost the whole business of the place, unless it be what is carried on by the gentlemen of the law, who are very numerous, in proportion to the total extent of the population.

To *Invergordon Ness*, 14 miles. This was a very delightful stage, though little occurred to gratify the sight of an agriculturist. The greatest part of the corn crops were of poor quality, and suffering dreadfully, in consequence of the severe drought. Potatoes seemed to be planted to a considerable extent, but few fields were good; and as for turnips, they are rarely cultivated in this part of Ross-shire. In crossing Sir Hugh Munro of Foulis' estate, we observed a greater number of small farms, than had hitherto been discernible in our progress. What might be the extent of the several possessions, would be difficult, from a cursory observation, to describe; but, to us, each man appeared to possess about four or five acres of what would be styled infield land, with a quantity of waste land backwards, still more difficult to ascertain. The infield, or town-land, so far as the imperfect condition of the ground admitted its quality to be estimated, looked to be good, though the crops, produced upon it, were of a very inferior cast. Indeed, we should suspect such farmers to be infinitely worse accommodated and provided, than the lowest working servants in the Southern districts of Scotland. Their circumstances, in other respects, are much more uncomfortable; for, in the true feudal spirit, they are dependent upon their chieftain; and must think and act agreeable to the principles maintained by him, or by those appointed to manage the property in his absence. We do not throw out these remarks, as particularly applicable to the estate in question; for the family of Munro have always maintained a distinguished rank in the list of benevolent landlords in the North. The fact is, these observations are applicable to this class of tenantry everywhere. To give a man only four or five acres of land, you hardly furnish him with the necessaries of life, even allowing he sat rent-free; and when it is considered, that such a limited possession deprives him of an opportunity of working regularly, an occa-

sion

sion of idleness is introduced, which, in course of time, becomes a regular habit.

Many Highland proprietors excuse themselves from making an innovation upon the ancient system, by pleading their aversion to remove these present tenants; which necessarily would be the case, were farms of a different size to become customary. Though this, abstractedly considered, is a most laudable principle, and deserves commendation; yet, we suspect, it operates very feebly in every transaction between landlord and tenant. None of the proprietors have any hesitation in raising a company, or recruiting a regiment upon their estates; and the means taken in such cases need not be enumerated. Under these circumstances, the best men on the estate are taken; the old and the feeble are left to cultivate the land; while the young, and the active, are transported to foreign lands, seldom to return; or, if they do return, it is in a maimed and enfeebled state. We view an estate, parcelled out in the manner which prevails in many Highland districts, as a kind of breeding seminary for recruits, where the landlord loses the full value of his property in the first instance, and consoles himself with the hope, that his loss will be compensated, afterwards, by rank and half-pay to himself and principal dependents.

There are some good inclosures about the house of Foulis; likewise much valuable woodland. At Novar, the seat of Sir Hector Munro, K. B., a variety of extensive improvements have been recently executed; upon which, large sums have been expended, much to the ornament of the country, and the credit of that distinguished officer. To Invergorden Ness, the soil is of a soft sandy nature, in bad order, and the crops were wretchedly poor.

Invergordon Ness, is a tolerably thriving place. Here, after being detained for six hours, we embarked in a crazy boat, and crossed the Cromarty Frith, though it required two trips, as usual, to ferry us over. A farm, belonging to a Mr Middleton, originally from Northumberland, struck our attention, as being cultivated in a superior style to what is customary in this part of the world. Saw a field of excellent wheat, and many other instances of good husbandry; but the country, in general, till we arrived in the neighbourhood of Fortrose, is barren and uncultivated, though very susceptible, in many places, of receiving beneficial improvement, provided any exertions were made by the possessors.

Fortrose

Fortrose is a Royal burgh, of little consequence, though very pleasantly situated upon the northern shore of the Moray Firth. The soil here is good, but the breadth of arable land much contracted. An old venerable Cathedral still remains here, in defiance of the waste of time, and the rude hand of reformers. Probably, this place was formerly the residence of the Bishop of Ross; but, upon this point, we had no leisure to make inquiry.

As the counties of Ross and Cromarty are much connected together, and under the administration of one magistrate, we shall here offer a few remarks upon the rural affairs of both. Ross contains a good many acres of fertile land, particularly in the eastern district, which we did not visit; but an acquaintance in the country gave us full information, concerning the soil, climate, and other circumstances. The main impediment to improved husbandry, is, a deficiency of capital stock among the tenantry; without which requisite, agriculture cannot flourish here, or elsewhere. The ancient class of tenants are poor in their circumstances, imperfect in their management, badly provided with farm-houses and offices, possessed of defective implements, and labouring with small cattle and poneys, often both yoked in the same plough. To expect improvement from such people would be unreasonable in the extreme; for, the most that they generally can perform, is to raise crops sufficient for preserving their existence, and paying the small quota of rent claimed by their landlord. We here speak of the small tenantry; for several respectable men are scattered up and down the two counties, who practise husbandry in all its branches, in a creditable manner. From them, however, it is impossible that the other class can derive much benefit, seeing, that if they were never so willing to imitate their management, existing circumstances render the imitation impracticable.

A large moor, or common, is situated in the heart of the peninsula of Cromarty, which runs nearly from the town of that name to the western extremity, near Beaulieu. Several attempts have been made to divide this extensive commonty, which, from the complicated nature of the claims upon it, have hitherto proved unsuccessful. The right of the burgh of Fortrose, augments the natural difficulties of the division; and we judge, that a particular act of Parliament is necessary, before it can be legally accomplished. If the

the burgh has a servitude, the general act of 1695 is inapplicable to the business.

It gave us surprise to learn, that the respectable Baronet, who drew up the survey of these counties, estimated their annual agricultural produce only at about 120,000l. Sterling; but our surprise ceased, when we were told of the *data* he assumed in forming his calculations. He first ascertained the *valued* rent, which was an easy matter; and, upon the supposition, that the *real* rent was four times greater, and that the tenant was entitled to four rents, for himself, landlord, and expences, the result was given accordingly. Notwithstanding, that four rents exceed the value of produce, in general cases, it is evident, that such *data* cannot be admitted, when the produce of bad land is to be reckoned. If the average rent of the northern counties be only 3d. *per* acre, as stated in the above-mentioned report, it would require the amount of thirty rents to plough a single acre; while the tenant, before he could enjoy an income of 25l. *per annum*, must possess two thousand acres of ground; which would be a poor return to a man who managed such an extensive undertaking.

The sheep husbandry has been lately successfully introduced into Ross-shire; and, in our opinion, the hilly parts cannot be managed in a more profitable manner. Much opposition prevailed, in the first instance, to this measure: but we believe, the popular clamour is now, in a great measure, removed. The chief magistrate of the county had great merit in this business; and we were told, that few gentlemen in the kingdom are better informed, concerning this new system of Highland husbandry, than the respectable personage alluded to.

Crossed the Moray Frith in one of the worst boats we ever entered, and, after an agreeable passage, landed safely below Fort-George. This is a regular fortification, and was built after the rebellion 1745. The consequences to the adjacent country are highly beneficial, as a ready market is provided for produce of every kind, which is the strongest encouragement to practical agriculture. The soil here, as in most places adjacent to the Moray Frith, is flat and sandy, but the greatest part of it is arable; and more than one half of the parish of Ardersier, in the bounds of which Fort-George is situated, is under cultivation.

To *Nairn*, 9 miles. The soil continues of a light sandy description, and barley and oats are the only grains raised.

The

The Norfolk system of husbandry might here be successfully practised; but a very material change would be necessary, before such a system could be profitably introduced.

We are sorry to learn, that a remark in the third part of this Tour, p 292, has given offence to some gentlemen at Nairn, which was a circumstance foreign to our intentions. The distresses of the lower orders, over all Scotland, in 18 c, especially in towns, were certainly very great; and, notwithstanding every effort used in their behalf, the necessary supplies were with difficulty procured, for supporting them, under such an extraordinary calamity. At Nairn, the appearance of the lower classes was such, as to make us believe, that the general distress was more severely felt there than in other places; and we said so. It affords us much pleasure, however, to learn, that we were mistaken; and that 'no one town in the island experienced less the extremes of 'want, or was more regularly supplied with grain and meal, 'than Nairn.'

To *Dulsie Bridge*, 11 miles. Adjacent to Nairn, the ground is of tolerable quality; but, as we advanced southward, it became little better than a heathy moor, intersected here and there with some patches of corn land. We observed a few sheep in the course of this stage. The road was very rough and unequal; worse, in every respect, than any we had passed since leaving Aberdeenshire.

To *Aviemore*, 20 miles. This place is situated in that delightful Highland district, called Strathspey, where, according to appearance, the people are more comfortably provided than in any other parts of the Highlands we visited. After leaving Dulsie-bridge, the country may be ranked as a barren moor, capable of carrying nothing but heath and wood. We saw some excellent timber upon Miss Brodie's estate, which would almost incline us to change our opinion respecting the value of the adjacent country; but, at any rate, this only applies to the low grounds; for, upon the hills, no branch of husbandry, but that of sheep, can be profitably carried on. As we entered Strathspey, the face of things wore a brighter aspect, and many decent fields of barley, oats, and oats and rye mixed, were discernible.

To *Pitmain*, 14 miles. Up Strathspey, the scene is truly agreeable The river runs in the middle of the low ground, and fields of corn and meadow-land are spread upon its banks. At Alvie-bridge, we left Strathspey; and here, we believe, the district of Badenoch commences. This district chiefly belongs to the Duke of Gordon, whose estate reaches nearly

nearly to Fort-William, and contains a number of fine fir woods, of great value. An elegant house, which we were told belonged to a Mr M'Pherson, presents itself in this stage; and, certainly, in a country like this, where elegant buildings are very rare, such a house cannot fail to excite the wonder and admiration of the neighbourhood. We were informed, that in Badenoch, the Duke of Gordon gives leases of no longer duration than three years, and that many of his tenants have none at all; which is certainly against his own interest, and the comfort of his numerous tenantry.

To *Dalwhinnie*, 13 miles. Some corn fields on the side of Spey; the high ground well calculated for sheep pasture. As we approached Dalwhinnie, the land became inferior, though the landlord of the inn had a barley or bigg field, of superior quality to any we had lately viewed; likewise a tolerably good garden, which must be a forced business, at such a height above the level of the sea. The climate must necessarily be as backward here as in any part of the island; for, upon the north side of several hills, snow was lying upon the 8th day of August.

To *Dalnacardoch*, 3 miles. About five miles northward of this place, we quitted the county of Inverness, and entered Perthshire; but, as yet, little improvement has taken place upon the face of the country. The ground, this stage, was barren and uncultivated; few houses were to be seen: and the only comfortable circumstance we experienced, was a good road, originally made at the expence of Government, and still upheld out of the annual grants bestowed by Parliament for supporting military roads in the Highlands.

To *Blair-in-Athole*, 10 miles. We now entered a better country, or, as Dr Johnson would have called it, a country of *Saddles and Bridles*, which gradually improved till we arrived at Blair, the residence of the Duke of Athole. The severity of the drought had injured the corn crops materially; but the fine grass fields about the house afford a striking contrast to those dreary scenes we had lately explored. The policy, gardens, &c. about Blair, are laid out in a very perfect style, and we enjoyed the most exquisite pleasure in viewing them: but, as his Grace and family resided there at the time, we could not see the house, which, externally, appears to be an ancient building.

We proceeded down the vale of Athole to Dunkeld, which is, perhaps, the most agreeable ride in the island. Great art, in many cases, has been used to increase the natural beauties of the country; and the traveller contemplates, with delight

delight, the various picturesque scenes which constantly occur to his observation. We examined Killicrankie-Pass, famous in song, and famous in history for the victory gained in 1689 by Lord Dundee over King William's army, under General Mackay, which is admirably calculated either for attack or defence. The vale here is very narrow, for at least a mile; and, at one part, the hills almost touch the river, the banks of which are very steep on both sides. Mackay had, that morning, marched from Dunkeld to the relief of Blair, and entered the pass in a long narrow line, the situation rendering it impossible to form his men in any other manner. Lord Dundee lay quiet upon the side of the hill, till the Royal army was advanced to the narrow pass, when, suddenly darting down, like a hawk upon his prey, he attacked in flank, overturned the whole line, and gained a complete victory.

Arrived at *Dunkeld*, which still exceeds Blair in rural beauties. It has been a happy circumstance for this part of Scotland, that the Dukes of Athole, for near a century past, have neither been politicians nor gamblers, but chiefly devoted their attention to the management and improvement of those extensive and valuable domains, held by them here and in other parts of the empire. Such a conduct is meritorious and praiseworthy; and, while it excites the respect of mankind, and eminently promotes the public good, cannot fail to prove a source of comfort to themselves, whence the purest happiness may be enjoyed.

Dunkeld is an ancient city, and was formerly a bishop's see. The cathedral is now used as the parish church. Some manufactures are carried on here, and a good deal of yarn spun in the adjoining country. Being in the mouth of the Highlands, a considerable share of trade is enjoyed by the inhabitants. These things, however, to a stranger, are but trifling objects, when compared with the rural beauties of the place, which are the admiration of every traveller. The Duke's house is a small, but elegant building, and contains a great number of family pictures. The pleasure-ground around the house, is of great extent, and, as we were informed by the person who shewed us the policy, contains no fewer than twenty-five miles of walks, all kept in excellent order. Some remarkably large larch trees, planted about fifty years ago, are here to be seen; and wood of all kinds thrives as well as in any part of Great Britain. From the top

top of a high hill, in the middle of the policy, which we ascended by a circular walk, a fine view was procured of the adjacent country.

Crossed the Tay in a kind of flat-bottomed boat, and proceeded for *Amelree*. Up the water of *Bran*, the country is remarkably populous; but the soil far from being good, and kept under bad management. Farms are of a small size, and much of the ground in a waste state. Very little woodland in this stage, and the roads are in miserable condition.

From Amelree to *Crief*, 11 miles. This is the roughest and most unequal stage we have travelled, and may well be styled the "*Devil's Causeway*." The ground is of a poor quality, till we came near the village of Crief, where several decent fields appeared. Crief is a thriving place, and the neighbouring country seems tolerably well cultivated.

To *Ardoch*, 11 miles. After passing the late Lord Perth's improvements, which seem to have been executed in a judicious manner, the country fell off, and cultivated fields were only here and there discernible. The soil appeared chiefly incumbent upon a wet bottom, which, of all others, is worst to manage; and grass constituted a principal object with the possessors. All this tract stands greatly in need of drainage, which, after all, is not much attended to.

To *Stirling*, 11 miles. Very little alteration upon the face of the country, till we came near Dumblane, where the soil is not only of excellent quality, but cultivated in the most judicious style. We here saw a turnip field, part drilled, and the remainder broad-cast. This root had not been in our view for a long time. The crops from Dumblane to Stirling were generally good, and such as land of superior quality ought always to carry.

From Stirling, down the Carse of Falkirk, there is an excellent tract of land, though perhaps the greatest part requires very dexterous management. The farms are mostly small; but the whole country is cultivated. We should suppose that carse-land, especially where so much wheat is sown, would require a greater portion of summer-fallow than was here discernible; but the several crops may be stated as excellent of their kinds, and superior to what we viewed in the Carse of Gowrie, which is naturally placed under similar circumstances. We do not think that the land from Stirling to Grangemouth is cropped in such a regular way as that of the Carse of Gowrie, nor that it is so clean; but, as

the crops were as good, if not superior, the inference must be, that the soil is either naturally richer, or that the season was more favourable to the first than to the last-named district.

To Edinburgh, the crop was very scanty, unless in the neighbourhood of Kirkliston, where fine land prevails, and judicious husdandry is practised. Nearer the metropolis, the drought and weeds had lessened the crop. Indeed, in the course of our progress, we uniformly found that the consequences of the unusual dry weather, in Summer 1800, were felt, in direct proportion to the goodness or badness of the husbandry practised.

It is proper, now, to give a few general observations at the conclusion of this Sketch.

The Eastern coast of Scotland appears advancing fast in agricultural science; and, as capital gets into the hands of the tenantry, every modern improvement may be expected to flourish and increase. A spirit of inquiry has, of late, spread rapidly, and in no district more extensively than in those of Angus, Mearns, and Aberdeen. In those counties, a great deal has been done, though much remains to be accomplished, before husbandry can be viewed as comparatively perfect. We here speak in general terms; for the practice of numerous individuals is as correct and judicious, as is to be found in the most favourite districts.

Farther northward, up the southern shores of the Moray Frith, a choice opportunity for introducing improved husbandry is every where to be found; and the introduction is favoured by the dryness of the soil, and earliness of climate; while no local circumstance is adverse or hostile to improvement, either in respect of aration or pasturage. This tract may be viewed as a granary to the manufacturing part of Scotland, and ranked as the Norfolk of this country; the soil and climate having a striking affinity. If proprietors would lend a hand, and give encouragement, we have not a doubt, but that the prospect will be realized, and that at an early period.

In the counties of Ross and Cromarty, many detached spots, favourable to improved husbandry, are to be found; but the great proportion of those districts must necessarily be employed in breeding animals. Sheep, in every point of view, claim the preference; for, it is fully ascertained, that a given space of ground will double, triple, nay quadruple the rent, when horned cattle are removed, and sheep substituted

tuted in their place; and this, undoubtedly, elucidates the system of husbandry which ought to be generally practised. We lay it down as a general principle, that cattle cannot be profitably reared, unless green food is provided for them in the Winter months: consequently, in hilly countries, where circumstances prevent aration being carried on with success, sheep is the most profitable animal; while the breeding of cattle ought to be confined to those districts where green crops can be raised for Winter food, and where the state of markets and population do not require a large supply of butcher-meat.

N.

FOR THE FARMER'S MAGAZINE.

Abstract of a Speech supposed to have been delivered in a Private Society.

Mr Preses,

Notwithstanding I consider the remarks, offered by a learned Gentleman, who has taken a share in this debate, upon the agricultural survey of a certain district, as a sure proof that it is not destitute of merit; yet, I am under the necessity of observing, that his strictures are totally unconnected with the question under consideration. The business on hand, is, the *improvement of the waste lands*; and certainly it was copious enough, without introducing extraneous matter. The learned Gentleman, who ought to be as good a judge of forms as any person, has, however, entirely neglected the proper subject, and wantonly attacked a local survey, which, I frankly acknowledge, has not gained much popularity. If the chapter of that survey, devoted to the Melioration of Waste Lands, had only engaged his attention, trifling as the remarks might have been, he still had been in order; but to censure the whole, without assigning a satisfactory reason, and to attack the character of individuals, who, though in the scale of life *rather* below him, yet, certainly, were respectable in their station, and useful members of society, will not, to any unprejudiced person, appear either liberal or candid. Upon any other subject, I would scarcely have thought it necessary to have intruded myself upon the attention of this Society; but what

has passed, renders any apology superfluous. I must therefore either defend myself, or tacitly allow that the censure is just, and my conduct improper.

Without questioning, further, the right which the learned Gentleman had to mention the survey, in the manner he has done, I must be excused for saying, that the censure was at once harsh and unjust, on his part; and on mine, wholly unmerited. I had the honour, in surveying the district in question, to be conjoined with two other farmers of great abilities; and the task of drawing up the report fell to my share; therefore consider myself as particularly responsible for any improprieties which may have occurred in its execution. Under a strong impression of this responsibility, I venture to say, that, notwithstanding his strictures upon the work, the most scrupulous analysis will find it in strict unison with the letter and spirit of our instructions.

Filling the respectable situations which the learned Gentleman has done, I would have expected, that, in conveying censure, or imputing blame, facts would have been stated, sufficient to warrant such censure. When proofs of that kind are brought forward, the public are in general convinced, and the convicted individual, in the place of courting discussion, or attempting his vindication, in the manner I now do, finds his safety in silence and obscurity. But I shun no discussion; on the contrary, I stand forward to repel the unprovoked attack. The law allows a fair trial to persons accused of the worst of crimes; and if a felon can demand such a trial, why should it be denied to me, against whom no charge can be brought, but that of endeavouring to execute, with all the ability in my power, the task assigned me?

I must be allowed to say, that no evidence has been adduced in my case; and that, in place of facts, the learned Gentleman has condemned me upon loose constructive insinuations. Have I given a false account of the present state of agriculture? If I have, let him point out my errors. If the obstacles to improvement, which I have mentioned, have no existence, let me be punished for propagating falsehoods; and if the means suggested for improvement are irrelevant, let their defects be condescended upon. In a word, if the survey does not contain a faithful picture of what the district now is, and also of what it might be, under the system I have laid down, let it be consigned to oblivion; which, after all, would now be a difficult task. To prove,

prove, however, that it is viewed in a favourable light by men of the first respectability, both in point of rank and talents, I will here use the freedom to read an extract from a letter with which I was favoured by a Noble Lord, intimately acquainted with the husbandry of the district, and who at one period took an active part in the proceedings of the Agricultural Board.

"I was much pleased in reading your valuable Report, amended, of the ....., which I received a few days since, and by which I am much obliged. I made many inquiries for it before its arrival. I have now quite finished reading it; and afterwards, shall frequently resort to it, as much knowledge in agriculture is contained in a small compass."

I have no vanity to gratify, in giving this extract; but have done it merely with a view to prove, that, even among persons of rank, there does not seem to be any fixed standard for opinion, and that, however much the learned Gentleman's authority may have been looked up to upon law affairs, it is at least questionable upon agricultural subjects.

In reprobating the introduction of political economy into an agricultural survey, the learned Gentleman is either ignorant of the plan laid down by the Board; or, if he ever knew it, must have forgot that a whole chapter is devoted to such subjects, independent of several sections included in other chapters. As the learned Gentleman was, till lately, an official member of the Board, it is reasonable to presume, that its proceedings were not unknown to him; if they were, there appears much harshness and injustice in arraigning the conduct of those, who, in strict obedience to orders, had done every thing in their power to promote the public good, and fulfil the intentions of those under whom they acted One excuse he may offer for his ignorance, namely, the numerous and important avocations of office; and I allow that it is a valid one: but if this should be pled, the public will perhaps be surprised, when they learn, that time was found to attend the meeting for displacing Sir John Sinclair, who was the founder of the Board, and whose name and merits will bear a comparison with those of the learned Gentleman, and will occupy a warm place in the hearts and remembrance of every wise and good man.

The learned Gentleman was pleased to say, that these Scottish farmers had taken upon them to condemn the whole system of agriculture practised in the district; to complain of tithes, and a variety of other matters of established

usage, of which they were totally ignorant. The first part of the charge, Sir, is expressly denied; and no person would have made it, who had deliberately perused the work, or who was acquainted with practical husbandry. The nature of the connexion betwixt landlord and tenant, is undoubtedly characterized as inimical to improvements; and, upon this point, I believe there are scarcely two opinions among those who have studied the subject. But, Sir, was there any guilt in offering our opinion, (and we did no more) even allowing that it was founded upon erroneous principles? We considered the want of leases as an unsurmountable obstacle to the improvement of the country; and this being our decided sentiment, we would have deserved the severest reproach, and been unworthy of the confidence reposed in us, had we omitted to describe the pernicious consequences attending the want of them, in the most forcible terms.

Upon the subject of tithes, less is said, I confess, than what the importance of the subject required; yet, notwithstanding that a great majority of all the surveyors concur in the opinion, that the drawing of tithe is hostile to improvement, none of them are arraigned, except the Scottish farmers employed by the Board, and who did not say one fourth so much upon the subject as some others. To what principle, or, rather, to what capricious motive, am I to ascribe this selection? Without troubling myself in searching for reasons, I say, that the surveyors neither meant, nor wished that any man, or any class of men, should be deprived of property, which the laws or usage of the country had conferred upon them. They only wished to commute a burthen, which had been long viewed as an impediment to agricultural improvement; and, certainly, commutations are not so rare, in Britain, as to make any wise man start when such a proposal was made. Upon this point, I need not remind the learned Gentleman of the established practice of the country which gave him birth, the beneficial consequences of which cannot have escaped his notice; nor need I call upon him to recollect, that no length of time can be pled in favour of any usage or custom, which, by an alteration of circumstances, may have become hurtful, or even inconvenient to the public, however universally acquiesced in formerly. That the payment of tithes in kind, has survived the circumstances to which they were originally owing, is generally acknowledged; and, as the Legislature is every day employed in repealing obsolete

and

and inconvenient laws, I am not without hope, that the subject of tithes will be found worthy of their attention, and that at a period not very distant.

With regard to our competency to judge of the utility of leases, or the payment of tithes in kind, the learned Gentleman's conclusion must be formed upon the worst *data*, or upon no *data* at all. Had the observation been applied to persons cultivating land in some of the English counties, where tithes are drawn in kind, and no leases are granted, and who had never observed the exertion and enterprise shown by farmers differently situated, there would, at least, be a shadow of reason on his side. With us, the case is different; we have seen both sides of the picture, and were thereby enabled to form a just comparative estimate of the advantages of our own situation, and the loss and disadvantage attending the other. Leases are general with us, and their benefit is indisputable; and though, fortunately, no great tithes are paid by farmers, slender observation was necessary, to convince us of the impolicy of a burthen, which unquestionably operates as a tax upon industry. May I remind the learned Gentleman, that every farm, from which tithe in kind is drawn, loses all its manure every tenth year; and did he think we were so lame in professional knowledge, as not to be able to appreciate the great loss, which every cultivator, so situated, must necessarily sustain?

As to the sources whence our information was drawn, I can, with confidence, assure the learned Gentleman, that the persons, upon whom he has, with much elegance, bestowed the name of *Ale-house Associates*, were of a very superior description. Several of them were *his* equals in *every* respect; and all of them greatly above spending their time in houses of that kind, even if we had been disposed to accompany them. The learned Gentleman's ignorance of our character, can only account for his imputing to us, what no person, who knows us, will believe, and what we very much despise. The only house that we entered, which could be described as an ale-house, was the inn at K.....h, where, over a bottle of humble port, we received from his own steward (a very honest man) a considerable part of the information, which he has so keenly animadverted upon.

But, how is the circumstance of retailing the ideas of ale-house politicians, to be reconciled with another part of the learned Gentleman's speech, wherein he accuses us with forming our sentiments, according to the customs and prac-

tices of our own country; thereby meaning, that we had not judgment to discriminate betwixt the soil, climate, markets, and other local particulars of the district surveyed, and those of North Britain? Now, Sir, in his defence, the alternative may be taken, but he cannot found upon both; for if we retailed the ideas of the ale-house politicians, (the learned Gentleman, I believe, was well acquainted with these gentlemen thirty years ago,) we certainly could not be influenced by any partaility for the customs and practices of our own country. It would be cruel to push him farther on this point, though such tergiversation furnishes a strong proof of the weakness of human nature, and how far people, of superior abilities, may go wrong, when they meddle with matters out of their ordinary sphere.

One word more, Sir, and I am done. The expression, *Scottish farmer*, has, of late, been used as a term of reproach; and the learned Gentleman indirectly countenances such unmerited obloquy. Here I might enquire, what degree of influence the River Tweed has in forming the human character? and whether the circumstances of birth and residence, on its Northern banks, are more unfavourabte to genius and enterprize, than when they take place farther southward? But, away with such illiberal sentiments! which, however current thirty or forty years ago, are now generally reprobated. I may, however, remark, that husbandry is practised in as perfect a manner in Scotland, as in the best English counties; and, if the rent paid by the occupier is admitted at a criterion, I am warranted in saying, that our practice is superior; for, a given space of ground in Scotland, pays more to the proprietor, than the same extent of land, of equal quality, does in England, every public burthen included. The ability to pay this higher rent, unquestionably proceeds from superior cultivation, as climate and markets are more favourable in the latter, than in the former. Without laying claim to the spirit of prophecy, I venture to predict, that, unless English proprietors grant leases upon proper terms, and the Legislature make arrangements in the tithe and poor-rate systems, and for dividing mixed property, the husbandry of England will rather languish and go back, than keep pace with the improvements in other sciences; and that our dependence upon other countries will increase, not in an arithmetical, but geometrical progression. I am supported in this prediction, by the respectable authority of the writer of the Statistical Account of Scotland, who says,

says, when speaking about the different rates of land-tax paid by England and Scotland, Appendix to the 20th volume, p. 91. — "Let the English pass a general bill of inclosure; let them modify tithes, so as to prevent their being a bar to improvement; let them restrain the poor-rates within moderate bounds; let them abolish any obnoxious remnants of the feudal system; let them grant proper leases to their tenants; and let them demand an adequate income from their estates; and the land of England will soon be as cheaply taxed as that of Scotland. It is owing to the circumstances above alluded to, that the rents of Scotland have proportionably increased more, under all the disadvantages of an inferior soil, of an inferior climate, of an inferior capital, and of inferior markets. Give England the same legal advantages, which Scotland at present happily possesses, and its agricultural prosperity would increase, in such a *ratio*, that the land-tax, it is now subject to, would not be felt."

Finally, Sir, as the learned gentleman has not spared my feelings, in attacking the survey in question, he cannot certainly blame me, if I have fallen short of that politeness with which he is accustomed to be addressed. I speak the language of truth, under the impression of feelings, which, I maintain, the learned gentleman had no right to wound.

N.

PART II.

Review of Agricultural Publications.

A Letter addressed to the Right Honourable Lord Carrington, President of the Board of Agriculture, by Colonel Fullarton of Fullarton, M. P. F. R. S. Author of the Agricultural Report for the County of Ayr: London printed for J. Debrett, 1801.

The Message, sent by the Committee of the House of Lords to the Board of Agriculture, relative to the best mode of "*converting grass-land to tillage, and restoring the same to grass in an improved state, or at least without injury,*" has put all

all the agricultural pens in the kingdom in motion; and, notwithstanding that Colonel Fullarton laments the shortness of time allowed for receiving communications, which, he thinks, "will preclude many intelligent and able agriculturists, at a distance, from transmitting their opinions," yet we learn, from indisputable authority, that no fewer than THREE HUNDRED AND THIRTY-FOUR ESSAYS, upon this important question, have been received by the Board. This circumstance decidedly ascertains the interest taken by the public in the increase of tillage land, and the opinion entertained, by professional men, relative to the advantages which may be gained, by changing the rural system, hitherto generally adopted among our Southern neighbours.

The question which forms the text, or ground-work of this letter, is confessedly of as much importance, as any one that can be submitted to the consideration of a practical agriculturist. It envolves every principle, connected with the right management of the soil; and, if treated in a proper manner, includes every branch of rural labour. Upon these accounts, such an inquiry may be viewed as a national object; for, if the soil constitutes the capital stock of a country, as maintained by many political economists; and if the exclusive grass system, hitherto adhered to in many English counties, has occasioned a serious loss to the public (a circumstance not now problematical); then every attempt to increase the produce of the soil, and to bring the whole land of the kingdom under a proper system, or course of management, must be regarded, as tending to promote the public welfare in an eminent degree.

We have long considered the knowledge of practical agriculturists as more limited, respecting the best methods of managing grass-land, when converted to tillage, than in any other branch of rural science; and it is not difficult to assign causes for this deficiency. It is but a small part of the profession that enjoy the opportunity of ploughing such lands; and even those, to whose share such a task has fallen, seldom have occasion to repeat the work; consequently, are precluded from bringing into action the wisdom gained in the course of the first attempt. When we speak of old grass-land, we are far from including those fields, to be found in almost every arable farm, which are broke up, after lying a few years in pasture grass.—No; we confine the remark to such lands as may have been deprived of aration, for twenty, fifty, or an hundred years, which is precisely the case of those

e lands, to which these inquiries are directed. The right agement of old grass-land, when first broke up, is a *de-ratum* in agriculture; for, though the advantages are ma-st, yet no branch of tillage requires more carefulness in cuting the different operations. The truth of these obser-ons is exemplified every day, by the many unsuccessful mpts made to cultivate land under such circumstances, ecially where the soil is of an heavy or argillaceous nature. Colonel Fullarton, the author of the pamphlet now before is well known to possess considerable abilities. His letters Lord Macartney, upon the politics of India, gained him at applause; and the survey of Ayrshire displayed much owledge of what is called country affairs. Prepossessed in favour, we entered upon his letter to Lord Carrington, h the eager hope of receiving valuable information, con-ning the best mode of breaking up grass-land: but we are ly sorry to say, that, in the perusal of it, we have been ch disappointed.

After paying several compliments to his Lordship and the ard, (well or ill founded we do not presume to inquire,) Colonel takes up the inquiry, according to the plan chalk-out in the Board's advertisement. The first section is de-ed to Clay Soils, which are too strong or wet for turnips; l this section may, in fact, be considered as the principal t of the Letter; for many things are here treated upon, ich were unnecessary to be repeated, when the other va-ies of soil were taken up. As the whole Letter is rather a desultory nature, and far from being well arranged, it is remely difficult to give a correct analysis of it. We shall, wever, endeavour to describe the leading particulars, in h a way, as may enable our readers, who have not seen pamphlet, to comprehend the sentiments offered to the ard upon this important business.

The first section is introduced with a chymical discussion the nature and properties of clay-soil, wherein the Board informed, that "clay, in the language of a chymist, is ery different from *clays*, in the language of a farmer."— ter four pages are thus employed, it is recommended to re-ve the superfluous moisture, whether proceeding from ings, spouts, or surface-water; and the advantages of ing such land dry, are satisfactorily described. Paring d burning the soil, is condemned, as tending to destroy the imal and vegetable substances, which may have cost the labour

labour of ages to collect; and it is advised to lay 400 bolls of slacked lime, *per* acre, upon the sward, before ploughing.—A moderately deep furrow, from four to six inches, according to the nature of the soil, taking care to shoulder up the furrows against each other, is stated, as the best way of ploughing clay land: and the rotation of crops recommended is, oats or wheat, as a first crop; potatoes, beans, and cabbages, to be taken in the second year; these to be succeeded by wheat; and the rotation to finish with barley, accompanied with grass-seeds. To the barley crop, it is proposed to give four ploughings, and twenty tons of compost, or manure, *per* acre. Potatoes upon the sward, with manure, are also recommended in another place, as a first crop; and, if the rotation shall be confined to three years, beans, wheat, and barley, with grass-seeds are proposed; or oats, beans, and wheat, or barley, as most agreeable to the land-owner. These last rotations are only slightly noticed.

Such are the outlines of the management recommended in this Letter, upon which we shall offer a few observations.

If there is an axiom in husbandry, the following is one, *to wit*, that, in order to render land fully productive, which has long remained in what may be called its natural state, there is an absolute necessity of ploughing it repeatedly during the Summer months, when the full advantages of aration can only be gained. This is what is commonly called Summer-fallowing; and though the practice is scouted by many modern agriculturists, we are convinced, that their opinions are founded upon mistaken principles, or rather, taken up from limited observation. If the soil to be worked is of a light friable nature, easily pulverized, and parting readily with the grass-roots, we can have no difficulty in acknowledging, that a bare Summer-fallow may be unnecessary; but, upon all strong soils, (and the section of this work, now under consideration, is devoted to "soils too strong and wet for turnips,") we expressly maintain, that the management is imperfect, (no matter what the crop is,) where Summer-fallow is withheld in the second year.

The Colonel's system, however, is of an opposite description. He is for cropping every year, without attending, that the multitude of grass roots, and other trumpery, with which such fields are filled, render perfect culture impracticable, before they are eradicated. Neither are such soils calculated for potatoes, turnips, cabbages, and carrots, even after they are completely worked; far less when they can

only

only be considered as one degree removed from their natural state; nor will beans thrive in perfection, before the ground is sufficiently cleaned. Besides, under every one of his rotations, the ground, when returned to grass, would be unfit for the growth of artificial seeds, the aboriginal inhabitants not being extirpated.

We entirely concur with what is said, respecting the necessity of laying grass-land dry, before the plough is entered upon it, without which, every other operation would, in a great measure, prove non-effective. We also join the Colonel in thinking paring and burning unnecessary upon clay soils, though not altogether on account of the reasons he assigns. Why paring and burning should be an objectionable practice, because rape is usually taken as a first crop, we cannot conceive. He says, rape "will feed sheep, but affords no aliment for the human species;" whereas, in our humble opinion, well fed mutton affords as good aliment as can be raised. The object intended by paring and burning, will be better accomplished by a complete Summer-fallow in the second year, when a dose of hot lime may be profitably administered.

The quantity of lime specified, as necessary to be applied to rich clay-land, we think inadequate for stimulating such a soil. The Colonel speaks of 400 bushels of slacked lime to the acre, which will not exceed 150 bushels, or 25 bolls, Linlithgow barley-measure, of good shells from the kiln. Perhaps, double that quantity may be safely administered; at least, we have always found it best to give a strong dose to argillaceous soils.

With regard to the course of crops, oats are undoubtedly the most proper grain to be sown the first year, when old grass-land is ploughed; therefore, we were surprised to see wheat recommended in a half and half manner, and the alluring prospect of five or six quarters, per acre, held out to the unexperienced farmer. Wheat will do well upon a tender clover lea; but has been rarely attempted upon old grass land, and never without the farmer suffering severely from such an injudicious measure. The impropriety of wheat, as a first crop, is, at last, felt by the Colonel himself, who is obliged to acknowledge, what ought not to have been questioned, that "oats are the staple grain for sowing grass-land at first breaking up."

For the reasons already assigned, we object to potatoes, cabbages, carrots, and turnips, being taken in the second year;

year; being firmly convinced, that any advantage gained by such articles, would be more than compensated by the deficiency of the subsequent crop, independent of the ground being in a much worse condition. Even drilled beans cannot e raised with advantage, as no land will work, either with horse or hand-hoe, before the turf is destroyed. The reader will please attend, that it is clay soils that are treated of in this section, and that the greatest part of the English pasture lands have not been ploughed for near a century.

With regard to potatoes upon the sward; how, in the name of wonder, is twenty tons of manure, per acre, to be procured, unless a robbery is committed upon the old tillage land? Few old pastures, when first broke up, are so poor as to require manure at the outset: indeed, the assistance to be gained from them to the old cultivated fields, has been a main argument with many people in favour of a conversion. We are clear, however, that a calcareous dressing will prove highly useful, both when the land is under corn crops, and when restored to grass. Such a stimulus is necessary for bringing the dormant power of the earth into action, and rousing principles which would otherwise remain lifeless and inactive.

The third crop, in the first proposed course, is wheat, which, if the land is in any decent kind of order, may be well enough, as we consider this grain not to be shy upon new lands, though the quality is commonly inferior to what is raised upon those that have been long ploughed. In the fourth year, it is recommended to sow barley with grass seeds; and, though four ploughings were given, it is not in the nature of things that the ground can be in any thing like good condition. Barley after wheat, upon a clay soil, is now out of fashion; and few seasons will admit of such a number of ploughings being given as are mentioned. If the weather is wet, every ploughing is attended by a positive loss; if it is dry, there is scarcely a possibility of retaining brairding moisture, after the second furrow is given. Very few farmers, from these untoward circumstances, attempt to raise barley upon clay soils, unless it be after drilled beans, where little Spring labour is necessary: it is at all times a hazardous crop, and may be ruined by a single heavy shower falling during any of the operations, or after the seed-work is finished. Under different circumstances, that is to say, when all the ploughings and harrowings are given in dry weather;

ther, an unequal braird and defective crop are the certain sequences.

Now, let us suppose that a farmer takes grass-land for tile, and binds himself to sow it down, in the fourth year, h a crop of barley, to which four ploughings are to be en. If the weather obeyed his command, no doubt he ght perform this obligation; but, as the power of man is so extensive, many things, otherwise proper, cannot be cuted in this dependent state. If the Colonel's recommenion was adopted by the Board, and enforced by landlords, at would become of good husbandry? Instead of returnthe land to grass, in an improved condition, it would be ted when under tillage, and scourged with quicks, thistles, every species of weeds, when restored to its primitive e; the relief afforded to the public necessities, in the first ance, being succeeded by a short-coming of the proprietor's t, and a decrease of produce for supplying our markets h the necessaries of life.

As to the kinds of grasses recommended to be sown, we rehend few good farmers will approve of such a mixture 4 lb. red clover, 4 lb. white, 4 lb. yellow, and two or three hels rye-grass: nor will many be of opinion, that either or two crops of hay ought to be taken, before the land is rendered to pasture. Very little red clover is required e sown, where permanent pasture is intended, because it lom remains longer in the ground than one year; whereas ite clover, which is a perennial plant, cannot be sown too k. Two or three bushels of rye-grass with the clover, ld be pernicious; such a quantity would destroy the ll seeds. One bushel, at all events, is sufficient; which, h 14 lb. white clover, 4 lb. red, and the like quantity of ow, will stock an acre of ground sufficiently with plants, give a full bite to the bestial depastured upon it during ry month of the season, from April to November.

Though it is rather out of our road, in reviewing this k, to point out another rotation, yet we cannot avoid rking, that a five course shift is by far the most eligible for clay lands, when such are to be temporarily convertto tillage: 1. Oats; 2. Summer-fallow with lime; 3. eat; 4. Drilled beans, with 27 inch intervals, and comely horse-hoed; 5 Barley, with one Winter and one ing ploughing, accompanied with grass seeds. Though re are only four productive crops in this course, we are decidedly

decidedly of opinion, that any three of them will, under a parity of circumstances, exceed in value those recommended by the Colonel; independent of the superior condition of the land when returned to grass, which will not only insure a greater quantity of food for the beasts afterwards depastured upon it, but also occasion it to be in superior condition, when tillage is again reverted to.

We now come to examine what is stated respecting the principle on which an increase of rent ought to be estimated, when old grass-land is to be broken up.

It is a difficult task to understand the Colonel's opinion upon this point, and we give him credit for his indecision; seeing that no rule can be laid down, for what must always be regulated by local circumstances. After quoting the history of a county (Ayrshire, we presume) where similar operations, he says, actually prevail, the Colonel hints at double rent during the time that the land is in tillage, which we, by no means, consider as an unreasonable proposition, in ordinary cases; but then, he does not advert to the strange nature of the English public burthens, which, in certain instances, operate according to the extent of the tenant's industry, and the value of the crop he raises. In another part, he proposes, that the rent should be ascertained by the verdict of men mutually chosen; who, in case of difficulties occuring, might have recourse to the ancient practice of France, in the case of the Metayers. Alas! Alas! Is the British husbandman to be put upon a footing with those poor oppressed people who cultivated the lands of France under the old government? Better keep the grass lands of England in their present comparative unproductive state for ever, than give the smallest countenance to a practice hostile to improvement, in every point of view, and contrary to the true spirit of the British constitution.

The crops described by the Colonel, as raised in similar instances, afford strong encouragement to plough the whole grass in the kingdom. Ten or twelve Winchester quarters of oats, five or six quarters of wheat, six or eight quarters of beans, cabbages worth 30l. or 40. four, five, or six hundred bushels of potatoes, and three or four tons of hay, are certainly crops seldom produced upon a single acre of ground. Perhaps some of them may be gained in favourable seasons; but the person who ploughs old grass land, under the expectation of receiving such extraordinary returns, will, in the end, experience utter disappointment.

As

As we have entered at length upon that part of the letter which relates to the management of "clay soils that are too strong or wet for turnips," we must restrict our observations upon the management of other soils, within a narrower compass.

The second distribution of soil, is loam, in all its distinctions, fit for turnips: but in this section, notwithstanding that it comprises the greatest portion of English pasture land, and that of the kind most fit for tillage, the Colonel is very short. After mentioning the savannas of America, the plains of Lombardy, the flats of Tanjore, and the Delta of Egypt (places certainly not included in these inquiries) he dismisses the subject with a few general remarks. We are left in the dark, respecting the manner in which this valuable variety of soil ought to be cropped, or in what way it can be best turned to grass, without injury, after carrying a few corn crops.

Sandy soils are next discussed. We have, in this section, a detail of two attempts, made by the author, to cultivate land of this kind; in none of which he appears to have been very successful. We observe the following mode of cultivating such lands in p. 34, which certainly is bad enough.

"If farmers and proprietors resolve to break up very light sandy grounds, to meet the pressure of the present moment, it is presumed they will find it, in no instance, eligible, to take any other crop of oats, except the ley crop. Wheat, with manure and compost, will answer for the second crop; and as, on such soils, there is little hazard of the corn lodging, and destroying the grass seeds, they may be sown with wheat, and the land, after two years, returned to grass: but if once such lands are broken up, there is a great temptation to continue them under a prolonged and skilful course of cultivation.'

We must consider wheat after oats, upon a sandy soil, as ruinous husbandry. Why not turnips drilled, which might be succeeded by wheat or barley; though, we believe, the last would be the most profitable crop? Corn lodges easiest upon sandy soils; though, under the management recommended in the text, there would be no hazard of such a circumstance occuring. We do not think there would be any necessity of sowing grass seeds, if wheat succeeded oats; for the ground would be sufficiently filled with roots, not to be purchased in the seedsman's shop.

The fourth section treats of chalk land and downs; but, neither are the crops, proper for such soils, enumerated, nor is any plan for cultivating them pointed out. The same remarks are, in a great measure, applicable to what is said respecting peat, moor, and fens; which section is eked out to a great length, by a description of Mr Smith of Swineridgemoor's improvements, Lord Kaimes' operations at Blair Drummond, and suggestions taken from Lord Dundonald's Treatise on the Principles of Chemistry applied to Agriculture. It is obvious, that though great and valuable improvements may be made upon this last class of soils, yet, from none of them can be drawn the supplies which the pressure of the times required, and which, in fact, occasioned these inquiries. Besides, every attempt to improve moorish and fenny soils, is expensive, in the first instance, and hazardous at the best. Much money has been sported away in such undertakings; while those that prove successful, are necessarily long in making a compensation for the original outlays.

We shall now extract the Colonel's concluding observations upon the system previously recommended.

"It will afford me a peculiar satisfaction, if the modes of management, specified in this Address, with relation to the leading qualities of land, shall prove useful, by shewing the safe and beneficial practice of breaking up pasture ground, and, after a course of corn, and green crops, returning it to grass, in an improved state.

"Every part of the plan recommended, is the result, not only of long and accurate observation, in many parts of the three kingdoms, but of actual operations, with which the writer is immediately connected, as a proprietor, as a farmer, and as trustee on large estates

"To what amount these suggestions may be practicably extended, in the immediate breaking up of pasture land, to increase the quantity of corn, is fit matter for the determination of your Lordship and the Board. Any calculation of mine might prove either imperfect or superfluous; especially, as such ample means of information are in your possession.

"Taking, however, the measure of different counties, as lately published by your able and enlightened Secretary, Mr Young, the two grazing counties of Cheshire and Leicester, alone, contain near 1,300,000 acres *.

"Supposing

* Many old farmers in Leicestershire recollect when the greatest part of the county was under regular course of tillage.

"Supposing one-third, or one-fourth, of those rich and long-rested pastures were ploughed this season, it is obvious, that the average produce would be more than double, in many cases triple, the produce of ordinary cultivated lands in England.

"By introducing, and continuing, such a system of convertible husbandry, much greater quantity of corn and herbage may be produced, than by constant tillage or invariable pasturage.

"If one million of such acres were ploughed, in different parts of these kingdoms, it is hardly fanciful to suppose, that an additional produce, from seven to ten millions of quarters of grain, exclusive of potatoes, would be added to the national supply in one year.

"How many such acres there are in the different counties, and how many tenants and proprietors, willing to call forth those advantages for their own benefit and the public relief, are questions of primary importance."

We agree with Colonel Fullarton, that, 'by introducing such a system of convertible husbandry, a much greater quantity of corn and herbage may be produced, than by constant tillage or invariable pasture;' but, we are far from thinking this desireable change will be accomplished by the measures he proposes: nay, we believe, that the multifarious returns made to the Board's inquiries, and any proceedings which may take place in consequence of the suggestions therein offered, will all go for nothing; and that convertible husbandry can never become prevalent, unless certain laws, which powerfully obstruct such a conversion, are previously repealed or amended. Upon this point, we have uniformly held one opinion; and every day's experience convinces us, more and more, of its truth. If the legal obstacles were removed, private interest would soon occasion what may be called the new system to be universally adopted.

That the ploughing of one million of acres of grass land, would add 'seven or ten millions of quarters of grain, exclusive of potatoes, to the national supply, in one year,' is very questionable. We consider, that six quarters, per acre, of all grains, would be a great average; yet this return would only furnish an additional supply of four and a half millions of quarters, after seed and horse corn are deducted. The most frugal calculation would require one and a half quarter per acre for these purposes; and, for every acre employed in raising potatoes, a further deduction must be made.

Thus, we have examined the leading parts of this Letter, so far as they apply to the 'conversion of grass land to tillage, without exhausting the soil, and returning the same to grass, in an improved state, or without injury:' and the substance of our sentiments thereupon shall be repeated; *to wit*, that, if the Colonel's ideas were practically adopted, the land so converted would not be beneficially managed when under the plough, nor restored to grass in an improved state. The crops of grain, in the first instance, would be defective; and the imperfect condition of the ground, when sown with grass seeds, would curtail the after produce, and lessen its future value.

The remainder of this Letter, viz. from page 64, to the conclusion, is devoted to various branches of political economy, not included in the Board's inquiries. These we shall shortly enumerate; and conclude with a few remarks.

The division and improvement of wastes and commons, are amply dilated upon; and a variety of opinions, relative to the best method of bringing these unproductive lands under cultivation, are offered. The Colonel proposes to adopt Mr Secretary Young's plan, by applying part of them to the relief of the lower ranks. He next recommends a statistical survey of the country; without which, he thinks, that 'Statesmen must remain as ignorant of the internal circumstances of the kingdom, as a land-owner, or steward, would be, who neither knew the extent, soil, produce, nor tenantry of the estate under his direction.' Again, as money is the sinew of improvement, he proposes the erection of a land bank, such as was offered to the Scottish Parliament by the celebrated Mr Law. Another plan, rather more novel, is, to cultivate the Crown waste lands and forests, by bodies of national cavalry; which, he thinks, would relieve the country, and increase our produce. Further, that the purposes of cultivation might be promoted, and consumption diminished, he suggests, that every person, who keeps horses not employed in agriculture, or other useful operations, should be obliged to expose, in the public market, certain quantities of grain, under regulations to be specified by the Legislature. Lastly, in the Postscript, he suggests the propriety of making all persons set apart a proportion of their income, for the supply of future wants; or, in other words, recommends a general extension of the principles upon which the Friendly Societies are constituted.

We

must confess, that we have not perused a pamphlet
ning such a number of political speculations; and, with-
mmenting upon their merits, which is altogether unne-
, it is enough to say, that the greatest part of them
every point of view, utterly impracticable. What is
ned concerning the division of wastes and commons,
es more attention.

cultivation of these lands is stated to be " more per-
interesting to the great body of the people, than any
n which has been agitated since the days of Magna
." It strikes us, however, that the great body of the
were originally but little concerned in obtaining the
charter; which proceeded from the exertions of the
barons to lessen the prerogatives of the Crown; and
ieir interest in the division of wastes and commons,
ot extend further, than in so far as their comfortable
ence materially depends upon the cultivation of these

Three-fourths of the people of England reside in
; and few, in such situations, have a servitude or claim
he common lands. This right is chiefly confined to
proprietors, or owners of cottages erected upon the
s of wastes; and, though exceptions prevail. (as in the
towns that possess a common muir, such as Newcastle,
iers in like circumstances,) yet they are not so numer-
to render the great body of the people deeply interested
neral division. Again, in several counties, the breadth
mon land, in consequence of former acts, is much
d; of course, the magnitude of the object to the in-
its is inconsiderable. Where commons have hitherto
ppropriated in severalty, the strictest attention has
iewn by the Legislature to the interest of the lower
or cottagers, who possessed a servitude over them;
instances have occurred where a spirit of dissatisfac-
s arisen, it proceeded from individuals who claimed
share than what they were legally entitled to. The
of dividing and inclosing has been more justly com-
of; but it is obvious, that this can only be remedied
neral bill; which measure has hitherto been success-
posed.

mention these particulars, in consequence of what is
70, relative to the aversion which the people through-
gland have to the division and inclosure of commons.
aversion proceeds from the inability of the cottagers
vate their allotments, then the blame does not origi-
the measure itself, but proceeds from the want of

skill and capital among the possessors. In this view of the matter, the Colonel appears at variance with himself, when he supports the arrangement offered by Mr Young; for the means of improvement would be equally wanting in both cases. If it is proper to erect a land-bank, in order that improvements might go forward, would not this measure enable cottagers, of every description, to cultivate their legal share of waste lands? The difficulties which small possessors have to encounter, are first exalted to the height of a mountain, and afterwards dwindled away, when a different system is to be supported.

After all, we must consider the improvement of the numerous wastes and commons of England as an impracticable measure, under the management of small possessors. In all our experience, we scarcely ever saw a piece of barren land improved, in a sufficient way, but when it was possessed by men of considerable capital, which is a *sine qua non* in such undertakings. The instance quoted by Colonel Fullarton, of a person upon his estate improving four acres of sandy soil, and bringing up his family in a creditable manner, does not affect our argument. Who built the cottage? Who inclosed the garden? Who ploughed, manured, and sowed the land? When these questions are answered, we may next inquire, Whether the produce of two acres of sandy land would be sufficient for the consumption of a large family, after seed is deducted; and whether the remainder of the land would feed a cow, a calf, some pigs, and a stock of poultry?

We remember well of the attempt made to improve part of the forfeited estates, after the peace of 1763, by settling colonies of disbanded soldiers upon them. Houses were built for their accommodation, gardens inclosed, implements furnished, and every encouragement afforded to the settlers. Those who wish to learn the result of these well-meant endeavours, may consult Mr Wight's Reports to the Board of Trustees, made twelve years afterwards; and they will find the attempt was altogether unsuccessful. To manufacturers, in country places, a small piece of ground may serve as an object of convenience, seldom of profit, unless it is underrented: But, to a labouring man, who must employ his time in working for others, a few acres of ground conveys no benefit; on the contrary, entails toil, trouble, and loss, on him and his family. In a word, we are clear, that the public interest would be materially injured by the increase of small allotments; because the people upon whom they would be bestowed

bestowed, are necessarily unable to labour the ground themselves, unless spade work was resorted to, the profit of which, under the present rate of wages, is at best problematical. We shall conclude this article, by extracting a passage from the Letter before us, which furnishes conclusive arguments against the utility of those small possessions. In page 73, the Colonel, speaking of small proprietors and petty holders, says,—"Unable to purchase horses, implements, manure, and seed-corn, to hire labourers to drain and cultivate their slender portions, their stock would be starved, and sold for half-value; and their holdings would soon be deserted, or disposed of to their wealthier neighbours. It would be an abuse of terms, to call measures, producing such effects, an improvement."

N.

Observations respecting the Grub, being a Paper read to the Holderness Agricultural Society, by William Stickney of Ridgemont, and published by the Society, 16 pages: Printed at Hull, by Robert Peck, *at the Packet-Office.*

THE damages occasioned by the Grub-worm are, in many seasons, so extensive, as to render the present inquiry an object of importance to every practical agriculturist. Mr Stickney appears to have devoted considerable attention to the subject, and to have deservedly obtained the thanks of the Holderness Society for the communication now before us.

The subject is discussed under three heads, viz. To what crops, and to what extent, is the Grub injurious to the interest of the agriculturist? Of what species of the insect-tribe is it? Can its depredations be lessened or prevented; and, if they can, by what means? The first and last are certainly of most importance; and, indeed, what is said upon the second branch, is confined to an extract from Chambers's Encyclopædia. With respect to that part of the question which inquires, to what crops, and to what extent, the grub is injurious, Mr S. observes, that grubs are produced in abundance in all grass-land, after the first or second year of its being laid down; and that clover stubbles are also much infested with them. Clean fallows, and lands divested of vegetables, he views as seldom exposed to their depreda-

tions; and he attributes the general loss sustained from these insects, in crop 1800, to the wetness of the preceding Summer. As to the last and most important part of the inquiry, the means of preventing or lessening their depredations, he thinks, lime spread upon ground infested with grubs, insufficient for destroying them; and, as a proof of this, gives the results of several experiments, made to ascertain the effects of this application. He is also of opinion, that any other substance applied to the soil, will be equally ineffectual in accomplishing their destruction.

Mr Stickney's sentiments are so conformable to those we have gathered in the course of an extensive practice upon lands naturally exposed to the ravages of the grub, that we cannot avoid complimenting him upon the accuracy of his remarks. Every old field of grass, when the plough is first applied, will be found stocked with these insects, especially if the soil is clay, or heavy loam, and incumbent upon a hard or close bottom. In the first year, the damage is generally trifling, as the strength of the plants enables them to resist every attack; but, in the after years, if their destruction is not completed by a regular Summer-fallow, the farmer is exposed to very heavy losses. When we first ploughed land of this description, we were led to persist in raising corn-crops for several years; but experience soon taught us, that, to avoid the ravage of the grub, no operation was so effectual as introducing Summer fallow in the second year; and that, if the season proved dry, and a thin dressing of dung was bestowed, all danger was thereby avoided. Paring and burning, in the first instance, we believe, will also accomplish the destruction of the grub; though, upon this point, we cannot speak experimentally. At any rate, Summer-fallow will answer the end, providing the season is dry; but we have had evidence, that, during a wet summer, the greatest number of ploughings may be ineffectual.

Upon a clover stubble, where wheat is often materially injured, it is obvious, that a different system is necessary.—Mr Stickney very properly conceives it to be of importance to sow such lands early in the season, so as the plants may gain strength before the grubs are in being. This is a very judicious hint, but difficult to be executed; for a second crop of clover can hardly be gained, consistent with an early seed-time for the wheat. We think his other remedy, of pasturing the herbage, after the first crop of clover is removed, would answer well. The accidents to which wheat, after clover,

clover, is exposed, have now, in a great measure, in the Northern districts, caused the practice to be laid aside; and oats are substituted, which are seldom injured, upon clover leas, and commonly give the farmer a more valuable return.

Mr Stickney thinks it bad policy to destroy rooks, as their diminution is probably one cause, why grubs have lately increased; and, in support of this opinion, quotes Pennant's Arctic Zoology. We have no doubt, but that rooks are mortal enemies to the grubs, and contribute greatly to prevent their increase; but whether the destruction of the one or the other would be most advantageous, is a point admitting of much discussion; and to be free of both, is unquestionably more to be desired.

A number of observations and experiments, made from August 1794 to August 1795, are included in this paper, which throw great light upon the natural history of the Grub-worm. We believe our readers will thank us for extracting them.

"Eighth Month, 11th (*August*) 1794. This seems to be about the time of the general change of the grub from the aurelia to the fly state.—I have not yet observed more than one to be with egg, nor have I seen any coupled together; I therefore apprehend, that, if clover stubbles could be ploughed sufficiently early, the temptation for the fly to deposit its egg there would be removed.

"22. I observed several of the flies in the act of copulation, particularly in the morning; but, on going amongst them in the evening, I could scarcely find any coupled together; but many of the females were in the act of depositing their eggs; in doing which, they kept continually dropping their tails to the roots of the grass, and moving about from place to place. On inspection, I found the eggs in those places where their tails had been; I took some of the flies, which were big with egg, into my hand, and, pressing them a little, they quitted several eggs, which they quit one by one, with a sudden spring. They appeared to me to be ready to deposit their eggs immediately after impregnation; for, on putting a number of the flies into a phial, I presently observed several of them in the act of copulation; and, almost immediately afterwards, I saw the females drop several eggs. Each of the females contains some hundreds of eggs; and what is still more extraordinary, the males appear to exceed the females in number, more than in the proportion of one hundred to one; so that, if the flies are not very numerous, it is difficult to find a female amongst them: this accounts for the observation made on the 11th of this month, that I had not then observed more than one to be with egg. Since that time, I have found that they are big with egg before they quit the husk

husk of the aurelia; and I have also observed, that the female is much larger than the male, and differs much from it in its shape in other respects.

"Ninth Month, 6th (*September.*) I believe most of the grub flies have deposited the principal part of their eggs. Yesterday, I took a number of the females big with egg, and killed them, by crushing their heads; notwithstanding which, their tails appeared for a considerable time to continue the power of performing their office. I folded them up in a piece of paper; and, on looking at them this evening, I found that most of them had dropped the principal part of their eggs. I have put some of the eggs into a pot, and have covered them about an inch deep with earth, in order to ascertain what length of time they will continue, before the production of the grub.

"Second Month, 5th (*Feb.*) 1795. I have not yet found any grubs, the produce of the eggs above mentioned; and I begin to be apprehensive that the eggs have been defective, or that I have destroyed them, by frequently stirring amongst the earth, in order to search for grubs. They are to be found in the fields before this time.

"Third Month, 27th (*March.*) Have been gathering some grubs, and found a considerable number amongst the wheat, in the east part of West Hill, which was clover-stubble: on the west side, which was bean-stuble, there are but few. I also found a considerable number in Far-Ground-Hill, it being clover-stuble; but in Wadworth-Hill, just adjoining, and which was clover-stuble also, there are but very few. Now, I cannot attempt to account for these differences, otherwise than by supposing, (as Wadworth-Hill was sown a week or two sooner than West-Hill, and three or four four weeks sooner than Far-Ground-Hill), that either the early ploughing of Wadworth-Hill had been performed before the flies had deposited their eggs, or, if eggs had been previously deposited, that the burying them by the plough in so early a stage of their natural incubation, had deprived them of the means of coming to maturity. Should repeated experiments ascertain, that early ploughing of clover-stubles will be the means of guarding them against infection by the grub, the discovery may prove an important benefit to the agriculturist, and to society.* Some of the grubs which I have got, are nearly full grown; the greater

* Since writing the above, I have discovered, from observation, that the difference in the quantity of grubs in those fields, was entirely owing to their situation, and not to the time of ploughing, as I then apprehended; for those parts where the grubs were least numerous, were surrounded by tillage land, where the flies had not been produced the preceding Summer, and consequently out of the way of infection, as the flies, when loaded with eggs, are incapable of a long flight; but the other parts adjoining, by grass-land, where the flies had been produced in abundance.

greater number of them are about half grown, but some are very small. I mean to separate them into two parcels, the large and small, each by themselves, to see whether there be much difference with respect to the time in which they remain in the grub state.

" 30th. Separated the grubs, and put them into four pots, numbered 1, 2, 3, 4; No. 1, which contains some of the largest and middle sized, and No. 4, which contains some of the smallest, I have placed in a window, into which the sun does not shine. I have placed No. 2, which also contains some of the largest and middle sized, and No. 3, which also contains some of the smallest, in a widow exposed to the action of the sun. My view in placing them thus, is, to observe whether the different degrees of heat, from the different exposures, will have any effect on the grubs, so as to hasten or retard their change to the aurelia: I mean to feed them twice a week with fresh grass.

" Fourth Month, 29th (*April.*) The grubs in the pots continue much the same as when put in, except that the small ones have increased a little in size.

" Fifth Month, 15th (*May*). Examined the grubs, and found an aureliæ in No. 1, in the shaded situation, but could not find any in the other pots; but several of them appear to be about changing.

" 24th. Found another aurelia in the same pot.

" Sixth Month, 4th (*June*). Found in No. I. the husk of the aureliæ, mentioned in the minute of the 15th of last month. The fly has taking wing.

" 12th. Discovered that the large and the small grubs, which I have hitherto considered of the same species, are of two different kinds; and that the small ones, which I apprehended were not arrived at maturity as grubs when I took them, are a distinct species, and are now generally changing from aureliæ to flies, which are of a different kind from that which is produced from the largest grub, which is not yet changed to the aurelia.

" Seventh Month, 1st (*July*). Have not found that any of the large grubs have yet changed to the aureliæ.

" 13th. Observed that some of the large grubs, as well in the shaded as in the sunny situation, have changed to the aureliæ; so that it does not appear, that the different degrees of heat have occasioned any difference as to the time of their change.—Put some of the aureliæ into a phial, in order to observe their progress.

" 29th. More of the grubs has changed to the aureliæ; but no flies have yet made their appearance.

" 31st. One of the aureliæ has changed to a fly, and several more grubs have become aureliæ. Many of them die about this time; so that I apprehend the operation of changing is a very painful one.

" Eighth

" Eighth Month, 10th (*August*). Many more of the aureliæ have changed to the fly; and I have observed many flies in the fields. I took some of them in the act of copulation, and put them into a phial; as soon as they separated, the females began to deposit their eggs.

" 20th. The grub flies are now very numerous; so that this appears to be about the time of the general change of the grub to the fly state. I took a number of the females, crushed their heads, in order to kill them, and folded them in a paper; and although apparently dead, except a motion about the tail, they continued to eject their eggs, as I have before observed and noted, in a former minute."

Upon the whole, we applaud the laudable attention displayed by the author, in investigating this important subject. We are also of opinion, that such investigations come very properly before a Society, instituted for the improvement of Agriculture. The numerous Societies, spread over all England, rarely encourage such useful inquiries; but devote their chief attention to bestowing trifling premiums for breeding stock, &c. which we suspect will produce little good. Nay, one of these Societies lately bestowed premiums of the like extent upon two persons, though their merits were, in every point of view, vastly different. The one had reared a number of children, and the other a number of chickens!!!

N.

PART III.

AGRICULTURAL INTELLIGENCE.

THE favourable rural prospect, presented in our last Number, is now almost completely realized: And though the crop of grain in Britain cannot, with justice, be reckoned uncommonly good; yet, from the extensive information transmitted to us, we are warranted to pronounce it equal, at least, to that raised in ordinary years. No shaking winds, nor rotting rains, have prevailed, as in the two preceding years, to destroy the fruits of the husbandman's labour; on the contrary, the weather, during the autumnal months, was uncommonly mild and serene: And, laying aside the partial

tial injury sustained upon gravelly soils by the severe drought of June, and the general spread of mildew and blight, over the wheat and barley fields, which succeeded the July rains; the crops of this year's growth have encountered fewer accidents, in their progress to maturity, than any raised within the compass of our remembrance.

These happy circumstances are already attended with their sure and certain consequence, *to wit*, a considerable reduction of the prices of grain; and substantially prove the doctrine we have uniformly inculcated respecting the corn trade. In the two past years, grain of all kinds was scarce; of course, prices rose to a high rate; and probably the rise was still further increased by the state of public affairs, which not only enlarged the demand, but rendered foreign assistance more difficult to be procured. Now, when we are favoured with a more plentiful crop, markets are fast returning to their ordinary level; which sufficiently ascertains, that prices are more governed by the quantity produced, than influenced by human regulations.

The consequences of the favourable weather, have also proved the futility of almost every cause, assigned by politicians and pamphleteers, for the late high price of provisions. With one class, it was owing to the great increase of the circulating medium; the natural inference from which was, that, so long as the circulating medium remained undiminished, provisions would not be cheap. With another, it was occasioned by monopolizing, forestalling, engrossing, and regrating; but, how these practices, granting their existence, could make one pound weight less of bread or meal in the island, was never elucidated. With a third, it proceeded from the increased size of farms; notwithstanding it is evident, that a large farm necessarily contributes more to the supply of the market, than the like space of ground divided among a number of possessors. The laws for regulating the export and import of grain, the increase of grass land, and above all, the war, were likewise stated as causes of the late calamity. We were always clear, that every one of these reasons of scarcity would disappear, whenever a fruitful season returned; and we are not disappointed. The circulating medium is not diminished; the laws, with respect to monoply and forestalling, are still the same; the size of farms continues to increase; the corn laws are not altered; the taste of the public for butcher-meat is not changed; and markets were fast declining, before the preliminaries of peace

peace were signed: Yet, in defiance of all those circumstances, and many others, which, for two years past, have been offered to public consideration, by political quacks, the prices of the necessaries of life, except butcher-meat, upon which the late season cannot directly have an effect, are greatly reduced. In a word, when the quantity of provision raised, is equal to the quantity required to supply the market, prices cannot be advanced above the ordinary rates; and whenever the quantity raised, is below what the consumption requires, prices will advance, in a proportional degree, in spite of every regulation that may be made to counteract them.

To what extent markets may be influenced by the happy termination of hostilities, it would be difficult to predict, as facts are wanting, from which the necessary conclusions can be drawn; but, that they will, to a certain extent, be influenced, requires no illustration. We have constantly maintained, that war, in no respect, was the primary cause of the late scarcity; though, we were clear, it served to increase an evil which, at any rate, was unavoidable in a lesser degree. Agreeable to these principles, we believe, that the restoration of peace will cause a greater reduction in the prices of produce, than would have actually happened, had hostilities continued. Every farmer knows, by experience, the difference betwixt supporting a servant in the master's house, and furnishing him with money, or grain, upon which he can support himself. In the first case, he will consume, or waste, nearly as much provision as would, in the other, feed not only himself, but also a wife and family. In like manner, the host of sailors and soldiers, that will now be disbanded, probably consumed three times more bread and butcher-meat, when employed by the public, than will fall to their share, after being dismissed.

Another important blessing, derived by the community from the late favourable season, besides reducing the price of grain, is, that the host of monopolizers, forestallers, engrossers, and regraters, who, for two years back, sucked the public vitals, have now entirely disappeared. These monsters, apparently, cannot exist in good weather; but, unlike every other part of the creation, whether human, animal, or vegetable, only live and act during the seasons of storms and tempest. To investigate their history, is well worthy philosophic attention; for, strange to tell! though

ough good weather appears to kill them; yet, after lying eless and inanimate for twenty, or even fifty years, they ll, all at once, in an adverse season, start up, and renew eir destructive ravages with as much vigour as ever. The blic have been so dreadfully harassed with their attacks, it it is much to be wished (their destruction is impos-ble) some effectual mode of resistance could be devised inst these monsters, before a season of adversity re-res suspended animation, and stimulates their destructive wers.

The high prices of cattle and sheep, mentioned in our last, ve rather increased than diminished, during this quarter; ough, we have cause to believe, that the cessation of war ll have considerable effect in producing a reduction. It well ascertained, that a great falling off in the number of tle and sheep, has, for two years back, been taking place, Britain, from the exorbitant prices tempting graziers and eders to sell every beast that was marketable; and, per-ps, the quantity of grass land has been lessened within the ne period. Whether these causes, or the increase of luxu-or the greater use of butcher-meat, owing to the scarcity grain (the very general adoption of public kitchens occa-ned more to be consumed) have produced this decrease, we will not take upon us to declare; but, that the number of tle and sheep, in Britain, is below the demand, appears un-estionable; and, what is worse, no change of system, nor itfulness of seasons, can restore plenty, for several years come, under the present rate of consumption, the breeding tricts being so much drained.

This is an argument used against the introduction of con-tible husbandry; but, in our humble opinion, it is a very ak one.—'Why attempt to cultivate the wastes, upon ich cattle and sheep are bred, or the old pasture lands, on which they are fed; seeing that the number of these mals in the Island is confessedly below what is required supplying the consumption of the inhabitants?' In this nner does one class of economists oppose the introduction convertible husbandry, without attending that the measure uld, in a very few years, occasion the quantity of herbage grain to be more than doubled. The wastes and com-ns, which, at this present day, do not yield a return ex-ding one stone of beef or mutton *per* acre in the year, y be rendered capable of producing twenty-five bushels

of

of grain, and five stones of beef or mutton, provided they were drained, ploughed, manured, and inclosed. The old pasture lands, renovated by tillage, would yield heavy crops of grain, in the first instance; and afterwards produce a greater quantity of grass than was procured from them in their original state; while the old cultivated fields, worn out and exhausted by incessant ploughing, would, when laid down to grass, afford a large supply of food for cattle and sheep, in the first instance, and prove a source whence full crops of grain might be drawn at a future period. These are a few of the benefits to be gained from the general introduction of convertible husbandry; a measure, in fact, absolutely necessary to the welfare of Great Britain, and the only one by which a regular supply of the necessaries of life can be insured to the inhabitants.

We are informed, that the importation of grain, flour, and meal, from foreign countries, has, in the course of this year, exceeded four millions of quarters; and that about fifteen millions Sterling have been expended upon the purchases, besides freight and other charges. Great as this quantity of grain appears at first sight, we believe it would hardly supply two months consumption of the inhabitants, and graniverous animals, in the island; for it is well understood, that thirty millions of quarters are required for these purposes, in ordinary seasons. From this quantity, may be deducted one fifth part, the supposed extent of last year's saving, which would reduce the quantity of grain consumed, to twenty-four millions of quarters. This displays the great importance of the inland trade in corn, and the necessity of paying an increased attention to its improvement; since, after searching every port, and purchasing at any price, however exorbitant, it turns out, that only one sixth of our annual supply could be procured from other nations. If the population of Britain continues to increase; if the chief capital stock of the country remains vested in trade and manufactures; if luxury, or, in other words, if the prosperity of the nation is not lessened; then our wants must annually be multiplied, and our dependence upon other countries, for the necessaries of life, be proportionally increased.

In this view of the business, it appears, that, under existing circumstances, the ports will remain constantly open to the introduction of foreign grain, and that the greatest crop will hardly meet the actual demand. Hence arises a necessity for protecting the British Agriculturist, and for preserving

preserving the home market to him, in preference to the foreign farmer, who raises corn upon lower terms in every respect: But we shall only mention labour and public burdens, as, in a question of this kind, rent only claims a secondary consideration.

We are none of those who are advocates for corn laws in the abstract; being convinced that a general freedom of trade, over all the world, such as subsists between conterminous counties in the same kingdom, would be accompanied with manifold advantages. But the situation of the country precludes the question from being taken up in this light. A very great proportion of landed property in Britain has been purchased, and innumerable leases are possessed, upon the faith of the present laws: therefore, a departure from the system would be accompanied with dangerous consequences to the proprietors and possessors of land, and take from them a part of their property, to enrich the rest of the community.

Upon the supposition, therefore, that the corn laws are necessary, it appears expedient to change the rates of import, in order to meet the increased value of labour, and the additional public burdens recently imposed upon the possessors of land. How far these rates ought to be raised, is a subject which requires serious consideration. When the corn laws were first thrown into a regular shape, in 1689, the chief object in view was, to procure a vent for the surplus grain of the island; and, in this view, the bounty was reckoned as a *bonus* granted to the landed interest. But circumstances are so materially altered, that every principle, which then weighed with the Legislature, may now be considered as extraneous and irrelevant. We have no surplus grain; therefore, the means of gaining a foreign market need not be offered; on the contrary, we seem to require an annual supply: consequently, any new regulation or law should merely be confined to securing the British farmer from being undersold in the home market by foreigners, who cultivate their lands at less expence, and under more favourable circumstances.

Want of room, in the proper place, induces us slightly to notice, in this leading article, the Report of the Committee of the Common-Council of the city of London, upon the high price of provisions, and the means of preventing scarcity at a future period. These sapient gentlemen pragmatically give their opinion upon several branches of rural economy; and, with an affectation of knowledge, only exceeded by

their ignorance, point out the most eligible methods of supplying the public market. Where the honest citizens gathered so much knowledge, we are not told; but we should suppose, that men, seldom out of the sound of Bow Bells, were not eminently qualified for discussing topics which have long puzzled the most enlightened economists. Let us put a case in point.—West India produce has, for several years, been uncommonly high priced; and to accomplish a reduction, would no doubt be a desireable circumstance. If a committee of farmers were to sit upon this weighty business; and were they to report, that the size of plantations was too large; that produce was forestalled and monopolized; and that every cask of sugar, and puncheon of rum, when imported, should be instantly exposed in the public market, which, at the same time, should be governed by strict regulations—we say, were a committee of farmers to act in this manner, the worthy citizens would certainly think, that lodgings for their accommodation ought to be provided in Moorfields. But, would the conduct of the one be more ridiculous and asburd than has already been evinced by the other? We think, on the contrary, it would be more wise; for farmers certainly know more concerning the digging and hoeing of a sugar plantation, than the citizens do about raising wheat, breeding pigs, or feeding cattle. The Corporation of London, twenty-seven years ago, experienced the severity of Mr Burke's satire upon a similar occasion; and it does not appear that their successors inherit a larger stock of wisdom. On the 25th of March 1773, when the bill, for regulating the import and export of corn, was before the House of Commons, Mr Burke said, 'No wonder we receive petitions for importation, and even for giving a bounty upon it, such as we received from the City of London. Sir, never was any thing so absurd. The City has a mouth, Sir, but it raises nothing; and, in attempting to procure supplies, acts with that ignorance of those matters which will always be found in cities. We should not condemn them; we should pity their ignorance: The citizens look for showers of barn-door fowls raining on them from heaven.—They come, with propriety, before us, on points of commerce and manufacture; and, I hope, we shall ever attend to them with care: But, when they presume to tell us how we are to conduct ourselves in relation to the products of our lands, to our pigs, poultry, butter, cheese, &c. let us not attend to their idle and impracticable schemes.'

Extracts

Extracts from Original Communications.

SCOTLAND.

Letter from a Gentleman in Berwickshire, October 4.

'I never saw any thing in vegetation like the progress made by my cold-seed peas, after the fine rains. I had six acres drilled beans, with a few peas mixed, upon land which was dunged; and, during the greatest part of the season, the peas were invisible; but, at harvest, they constituted the greatest part of the crop, most of them being nine feet long upon an average, and remarkably well podded. If well got, I expect the six acres will keep my eight horses four months in fodder.

Before winter 1799, I ploughed in, upon oat stubble out of lea, twenty-five barrels to the English acre, of spoiled salt herrings upon a four acre field. In 1800, I cropped it with turnips, which were eaten in my fold-yard by cows and young stock; and, allowing 3s. 6d. *per* week over head, produced 12l. *per* acre. This year, the field was in barley, and yielded seven bolls *per* acre, leaving as fine a stool of young clover and rye-grass as ever I saw. A second break of four acres, also covered with herrings, missed turnips altogether last year, being sown after the long drought commenced; but has this year produced a very heavy crop of oats, with an excellent promise of young grass. I had two hundred barrels of herrings, which cost me less than a shilling *per* barrel, laid on the land: they were ploughed in; a boy attending each plough, with a fork, to put into the open furrow any of the herrings that remained above ground.'

Letter from a Gentleman near Stonehaven, October 8.

'I am warmly interested in the success of the Farmer's Magazine, not only on the principle of public spirit, since I am satisfied that it does much good; but also from regard to the individuals who have undertaken such a work. One subject which I have often meant to discuss, has already been fully treated of in your work, viz. the beneficial consequences of forestalling. Another subject which I wish to see discussed, is that of flax-raising, as I know no agricultural practice that deserves more to be reprobated than this one, so long as the country does not produce food for the support of its inhabitants. No state, but Britain, ever dreamed, in its *mania* for manufactures, to give a bounty for diverting productive land from the growth of grain, and applying it to the raising a crop of the most exhausting kind. It may easily be shown,

that none except *alluvial* land is fit for flax; and we have little of it in Britain, holding away from the Lincolnshire fens.

I had a very great shew of wheat, but suffered most sadly from mildew. In general, we have no good wheat, much of it being mildewed and blacked.—By the bye, to what do you attribute mildew? It appeared to me, this season, to arise from a sea-fog, which we had for several days, after the flower was off the ear, or while it was going off: immediately after this, the leaf withered, and fell prematurely.

Turnips have not had a recovery, but a resurrection. From the most despicable appearance, they have become a fine crop, and are still in a progressive state of improvement; but I see no prospect of procuring stock for them. The country is exhausted of cattle, which were bought up at excessive prices. I have seen ten and eleven shillings *per* stone, Amsterdam weight, given for lean cattle; and have been told of some that were sold as high as twelve shillings. The demand is now a little slackened. Very little wheat is yet sown, and I think less will be sown this year than usual.'

Morayshire Quarterly Report.

Our harvest is mostly over, and never was the crop got home in better condition. We met with no interruption from rain; and, if a few stacks have heated in the yard, it could only proceed from an over-anxiety to have the corn out of the fields. Both oats and barley are certainly of fine quality, and bulk beyond expectation; while a good deal of mildewed and smutty wheat may be expected. Much of this latter grain is sown; some fields are already quite green! No contracts for corn, of crop 1801, have yet been entered into; and, during the continuance of this fine weather, little will be thrashed out; for the foggage is abundant, and fewer cattle than usual in the country. Until peace was announced, they continued at prices beyond any thing ever heard of in the north; but, for the present, dealers are disposed to stand off.

At Elgin, best beef sells at 8d. per lib. of 17½ oz.; mutton, 6d. to 7d.

Old oatmeal, 1s. per 9 lb.; new, 15d.

Potatoes, 6d. per peck of 32 lb. Dutch.—*October* 13.

Fife Quarterly Report.

The season, in general, has been remarkably favourable to every crop, hay excepted, which has turned out very light; indeed, equally so as last year, the rains coming too late for it. The barley early sown on light land, has little straw, having been injured by the long drought. The harvest has been early, and the weather uncommonly

ly favourable: victual, of all sorts, well filled, and ripened equally; and, with some few exceptions, is now all got into the stack-yard.

Wheat is universally a good crop; bulky in straw, and the grain of fine quality: but many fields of it, especially in high situations, and on soft land, much infected with smut. A much greater quantity was sown than usual in this county; and the produce, per acre, supposed one third above an average crop: the quantity of flour, in whole, supposed considerably above both the two preceding years together.

The late fine weather enabled the farmers to sow a large proportion of ground, well prepared, with wheat: much of it is already up, and looking well; indeed, remarkably so. Peas and beans an average crop.

Barley.—From so much wheat being sown, less ground was left in condition for this grain than usual; but, as the crop in general is good, and well ripened, it is supposed the quantity is equal to an average crop. Although the grain is observed to be rather small sized, it is very equal, and fit for malt; that part excepted (indeed a small proportion) too soon taken in, and some not taken in yet.

Oats.—The dearth and scarcity of oatmeal last Spring, acted as a bounty to raise an additional quantity of this grain. High rents were offered by the farmers for rich old pastures (5l. 7l. and even 9l. per acre) which had not been ploughed for thirty or forty years. These were let for two crops, to a great extent. The crops of oats, on all such lands, very fine, but not at all in proportion to the length of time in pasture, and scarcely any thing superior to land laid down in heart, and pastured for five or six years. The fine season has given an abundant crop of this grain. On all lands, wet and dry, high and low, the crop is bulky, and the grain full, and gives much meal. The quantity produced in the county, is generally supposed equal to the produce of both crop 1799 and 1800 together; on the whole, greatly above an average crop.

Potatoes.—A greater quantity planted of this root than ever known: the produce great, and the quality very fine.

Turnips.—Some of the first sown failed; but, in general, they may be about an average crop, the late sown being very good.

Flax.—A very large quantity always sown in this county; the crop supposed an average one. What is already dressed of this crop, is of fine quality, and the whole will probably be so. The flax seed saved for the oil-mills, of this crop, is good, and the quantity considerable, and fetches a price one fourth more than ordinary.

The second crop of clover, very poor in general; few fields worth cutting. Young clover and rye-grass looking fine.—*October* 13.

Mearns Quarterly Report.

Corn, of every description, has been a fair average crop, and early ready, as usual, in the low parts of this county, but rather retarded in harvest, by a scarcity of hands to cut it down. The weather, however, continuing good for such a long period, has enabled the generality of the farmers to get their crop safely in, there being but a very few that have suffered themselves to be *caught* in the late rains. The first crop of hay was very indifferent, and even in many places very bad; but the second crop is in general luxuriant. Turnip is universally a great crop, and much of it cultivated. Cattle, of which the breed here is among the best in the north, are in general in fine order, from the late mildness of the season, which has occasioned an abundance of foggage; but the number is uncommonly diminished, owing to the great demand from the south, in the early part of the season, and were not even then plenty; as, from the prevalence of scarcity in the two preceding years, every beast, at all fit, and even many utterly unfit, for the market, were disposed of; so that, at present, there are fewer on hand than ever before in recollection. The operations for the next crop are getting forward apace. Much wheat was early sown, and looks now extremely well; while the lands still remaining for that crop, as well as the barley fallows, (here generally *ribbed*), are getting on with all expedition.——*October* 14.

Aberdeenshire Quarterly Report.

The weather, during the last three months, has been, upon the whole, so mild and favourable, as could not fail to produce a good crop; yet, even in this year, a certain proportion of the barley and oats, over all this county, will be found light, owing to mildew, lightning, or something in the atmosphere affecting them when in the flower: however, the greatest part of both, especially the oats, is very fine grain: and as no loss has been sustained in harvesting either by wind or rain, the crop, upon the whole, with all its deficiencies, may be considered as above an average one, both in respect of grain and fodder.

Notwithstanding the early bad aspect of our turnips, they have, of late, come forward with great rapidity, and promise to be a fine crop; so are potatoes; and the after-grass or fog, on all the clover or pasture fields, is fully equal to what is gained in any season. New grass, also, fills the ground well; and promises, if the Winter is not very severe, to give us a full supply next season. Cattle have sold at very high prices all this quarter; and appeared rather upon the advance when the news of peace arrived. This event has startled the purchasers, who now look shy; little reduction of former

former prices has, however, yet taken place. Grain has come down much; and it is expected that prices will be still lower. But, in this county, markets are generally regulated by the foreign demand, seldom by the home consumption.——*October* 15.

Letter from Glasgow, 17th October.

'The greatest part of our crop of wheat, barley, and oats, was got into the barn-yards, about the beginning of this month, in fine condition. The crop of beans and peas is only got all in within these few days. Wheat, of which there was an extra quantity sown last year, has turned out an abundant crop, and of very fine quality, weighing from 60 to 64 lbs. Linlithgow firlot. Oats are also considerably above a fair average. A great quantity of old pasture ground being let this season for tillage, at very high rents, say from 10l. to 16l. per acre, rendered, in general, most extraordinary crops, supposed from 12 to 16 bolls per acre; on which account, we may suppose the average of the neighbourhood not to be less than 8 to 10 bolls per acre, and the quality good; on an average turning out from 14 to 15 pecks of meal per boll. Barley is a short crop, in quantity; the quality also but poor. Beans and peas have turned out a good crop, although longer upon the field than any of the other. Potatoes, of which a large quantity was planted this year, have turned out very productive, and the quality is, in general, very good. Hay, as we mentioned in our last, was but a light crop, owing to the long continued dry weather in the beginning of Summer; but this deficiency is amply made up by an extraordinary after crop, a great part of which has been cut, and got well winned: this, with the large quantity of straw, will, no doubt, reduce the price considerably under what it has been for this some time past. What importations we have had, for these last three months, have been mostly from America, and may be stated to have been from 30 to 40,000 bolls of wheat, and about 20,000 barrels of wheat-flour, besides rye-flour, Indian corn, and Indian-corn meal. As our market was but bare at the time the importations commenced, a great part of the flour may be said to be consumed; most of the Indian corn and meal; as also, about 15,000 bolls of the wheat. The flour sold from 63s. to 35s. per barrel; the wheat, from 63s. to 40s. per boll. As there is still a considerable quantity of old wheat on hand, we think it will be nearly sufficient to serve the consumpt, as a mixture for the new, to the ensuing Spring; by which time we may expect an importation of Baltic wheat. We have but few old oats left on hand; but, from the abundant crop, and good quality of the new, there can be no scarcity of that grain before the Spring, when we may expect a considerable importation from Ireland. Annexed, you have the state of our markets.

Present Prices of Grain, &c. at Glasgow.

American wheat -	35s.	to 36s.	*p.* boll of 240 lb. English.
Dantzic do. - -	35s.	.. 38s.	Linlithgow Standard.
Baltic red do. - -	30s.	.. 35s.	
British old do. - -	30s.	.. 35s.	
Do. new do. - -	26s.	.. 30s.	
Do. do. Barley -	22s.	.. 24s.	Stirling Measure, 7½ per cent. above the Linlithgow standard.
Foreign old oats -	20s.	.. 22s.	
British do. do. -	22s.	.. 24s.	
Do. new do. -	14s.	.. 18s.	
Do. old beans -	20s.	.. 26s.	
Do. do. grey peas	21s.	..	
Do. do. white do.	22s.	.. 24s.	
American do. do. do.	25s.	..	
Oatmeal - - -	15s.	.. 19s.	per boll, or 1s. to 1s. 3d. per peck retail.
Peas and barley meal	12s.	.. 13s. 4d.	per boll, or 10d. to 11d. per peck retail.
Flour in bags - -	55s.	.. 60s.	of 2¼ cwt.
Sweet do. in barrels	35s.	.. 37s.	of 196 lib.
Irish butter - -	1s.	.. 1s. 2d.	per lib. Tron weight.
Scotch do. - - -	1s. 2d.	.. 1s. 4d.	per do. do. do.
Beef - - - - -	8d.	.. 1s.	per do. do. do.
Mutton - - - -	7d.	.. 9d.	per do. do. do.
Hay - - - - -	10d.	.. 1s.	per stone do. do.
Straw - - - - -	3d.	.. 4d.	per do. do. do.

Letter from Grangemouth, 17th October.

'The crop in this neighbourhood, with the exception of a few beans, has been all stacked in good order. Wheat is an abundant crop, the quality in general fine; weight, 60 to 63 lib. per firlot. Oats are a very heavy crop, and much more productive than those of last year: the quality is excellent, weighing from 56 to 61 lib. per Linlithgow firlot. The crop of barley is more plentiful than last year, but short, perhaps one fifth, of a common average. The quality is generally coarse, and far inferior to former years, particularly in the low grounds, and where it was late sown: the weight very various; 68 to 75 lib. per firlot. Peas are above an average crop; of good quality; and will weigh 65 lib. per firlot. Beans are a very poor crop, not half an average; middling quality: where mixed with peas, better, in proportion to the quantity of the peas. The crop of potatoes will much exceed, in quantity, any former year's produce, as a greater proportion of ground was planted; and the quality is very fine. There are not yet many taken

taken up. The season has been favourable for wheat sowing: but there does not appear to be so much put down as last year.

The supplies of new grain, hitherto brought to our market, have been small. When the growers thrash out more freely, a decline may be looked for; but they do not seem inclined to do so at present. The following are our present prices:

Wheat, 24s. to 28s.
Barley, 18s. to 23s. } per Linlithgow boll.
Oats, 13s. to 16s.
Peas and beans, none.
Oat-meal, 1s. 1d. per peck
Barley-meal, 10d. } in retail.
Potatoes, 4½d. to 5d.

Ross-shire Quarterly Report.

This district has enjoyed a favourable harvest, and the greatest part of the crop is safe in the stack-yard The long continued drought served to check the luxuriant growth of wheat, and saved it from lodging; though the bulk, after all, was very great. Black, or smut, is more common than usual; and, in some instances, considerable loss has been sustained by *rust*, which weakened the plant, and prevented the grain from filling.

Oats are an excellent crop, and promise to meal well. Barley is below an average. Peas tolerably bulky, and well podded. Potatoes good every where. Turnips, where a braird was speedily procured, are above medium; but many of them late, owing to the severe drought in Summer. Prices for oatmeal and barley set in high; but will now be regulated by the market rates of other places, as we will be able to spare a considerable quantity for exportation.

Cattle, during the Summer and Autumn months, sold uncommonly high The demand was daily increasing, till the sound of Peace reached us; which operated upon our drovers like an electrical shock, and caused all business in that line to remain at a stand.

It may be noticed, that the writer of this Report made a trial of raising cabbages from old roots, as recommended by the Perthshire farmer, Vol. 1. p. 386, which proved unsuccessful. About the end of October 1800, half a hundred roots were taken up, and planted as directed. They stood the Winter well; but, in the Spring, every one of them run to seed: which corroborates what is said by Mr A. S. page 273. of your last number.——*October* 17.

Letter from a Gentleman in the neighbourhood of Perth, October 19.

'The harvest, in this quarter, was all finished in September. The crop, on the whole, is a good one; very high in the comparison with

with either of the two preceding crops. I may rate *it* at three-fourths of the produce of both these years; which, indeed, says little for 1799 and 1800, although the fact was most feelingly known to many. At same time, it is my opinion, good as the present crop is, that crop 1798 was considerably better. The different species of grain, of this year's crop, I rate thus—

Wheat, in general, good in quality, (although some parcels are much smutted); the quantity, *per* acre, a full average crop.

Oats, an excellent crop, both as to quantity and quality.

Barley, rather under ordinary in quality, but well got; and, I trust, will stand pretty fair as to quantity *per* acre.

Peas, greatly inferior to last year's. The *Potatoe crop*, (notwithstanding the number of curled plants) is good, both in quantity and quality. Turnips have improved beyond the most sanguine expectation; and are still increasing in their roots. We have had two or three mornings of hoar frost within this month; but they were always succeeded by rains, almost in the course of the following day, which prevented the bad effects of the frost on the after grass; so that there is plenty of keep still in the fields, for stock of all sorts.

Being now blessed with the return of *Peace*, we may the readier bear with declining prices, both of grain and cattle. No doubt the good crop will make up for a very considerable reduction in the rate of grain; however, should it continue falling, at the pace it has done for some weeks past, it may get under a saving price for the grower. The fall on cattle, so far as I have had access to learn, has been from *ten* to *twelve per cent*; however, had it not been the plenty of keep still remaining on the fields, which enables the present holders to retain their stock on hand, I should have supposed prices must have dropped still considerably more. Another thing may also operate to prevent the depression of prices; namely, the great *numbers which* were drawn off from the breeding counties, for some years past, and, too, at an earlier age than used to be; so that the stock of bestial now remaining will not be, as it were, forced to market, by tempting prices, until they arrive at full age.

The late rains have retarded the sowing of wheat on the potatoe lands. The fallow fields, made in the end of last month, are now exhibiting a beautiful green.'

East Lothian Quarterly Report.

THE singular mildness of the weather during the whole of August, and the greatest part of September, brought forward the late crops of grain, roots, and grass, in a remarkable manner, and permitted harvest work to be executed with less interruption than commonly happens

happens in this northern part of the Island. It is believed, that hardly a peck of grain was lost in this district, by shaking winds; though, perhaps, from the ripeness and freeness of the ear, a considerable quantity dropped in the working. The moderation of the weather, however, occasioned much damage to those who were over anxious about an early ingathering, especially in the articles of barley and oats. In all dry seasons, the natural moisture of the straw requires a long exposure to the air before it is extracted; and as little wind prevailed in the early part of harvest, the ordinary danger was consequently augmented.

Though the crop of this district will prove vastly more productive than that of the preceding year, it cannot be estimated as exceeding an ordinary average; perhaps, in several respects, it will prove below it. A considerable proportion of wheat was either mildewed, blighted, or smutted; which, laying aside its appearance in the field, is evident from the quality of what has been exhibited in the public markets. Owing to these circumstances, the value of this grain is very variable; consequently, prices will remain at a greater distance than occurs in common seasons. After all, from the extent of land occupied with wheat, a doubt is not entertained, but that the quantity of this year's growth exceeds what has hitherto been raised in this district, in any one season.

Barley suffered in a proportionable way with wheat, and probably from the same causes, viz. the rains and fogs of July. Very few good samples of this grain are to be seen; and, if distilling continues to be prohibited, the disposal of it will be a difficult business. Oats may be considered as a good crop, both in respect of produce of grain, and in return of meal from the mill; though, in the latter case, we have often experienced a greater. The best oats will yield about a peck of meal above corn; whereas, in very favourable years, particularly 1796 and 1798, nine stone of meal from a boll of oats was no uncommon return. Peas and beans, though bulky in fodder, will not be productive in grain, notwithstanding that the late pods filled better than could be expected.

Turnips are a variable crop, though astonishingly improved, and carrying an immense foliage upon a root generally smaller than common. Roota-baga is much inferior to what was raised last year, which may be attributed to the drought in June, and the rapid growth which followed the July rains. Potatoes may be reckoned a good crop; though, in this district, they cannot be considered as uncommonly productive. The second crop of clover was infinitely superior to any gained for several years past.

The pasture-lands have carried a large growth of grass during this quarter, which, owing to the comparative smallness of stock kept, remains, in a great measure, to be consumed. Fat cattle and sheep

are

are scarcer than ever remembered; nor will this excite surprise, when it is known, that they have been bought by the butcher as fast as they were ready for the knife. Prices, of course, have not fallen, as customarily takes place at this time of the year; and, if other districts are not better provided, there is reason to presume, that a great declension will not take place during the Winter months.

The grain market, since harvest, has been well supplied; a greater quantity having been thrashed than common, from the need every farmer felt for straw to cover his crop. Prices have dropped gradually; but no opinion can be given upon their future rates, so long as importation is continued. The wholesale merchants are also cautious in commencing their usual purchases; and little has been done in this way, except in the article of oats.

A considerable quantity of wheat is put into the ground; but this important operation has been much retarded, by the recent wet weather. Several fields, sown at an early period, are making a vigorous appearance. It is believed, that less wheat will be sown than last year; the quantity of dung, from the shortcoming of crop 1800, being hardly one-half so large as customary; and, without a full supply of manure, it is not reconcileable with prudence to extend the culture of wheat.

Upon the whole, the year 1801, in every circumstance, from the sowing of the seed to the ingathering of the crop, presented a striking contrast to the two preceding years, and promises to place the agricultural state of this, and other districts, in something like a similar condition to what formerly prevailed.——*October* 21.

We are favoured by a gentleman, in the vicinity of Edinburgh, with the following extract of a letter, dated July 6. 1801, from his correspondent in Pennsylvania.

Letter from Pennsylvania.

"I have been looking over some of your agricultural surveys, and find there is a great difference in that line here, owing perhaps to soil and climate. A bushel of seed to the English acre is sufficient; and the greatest produce is, from 20 to 25 bushels, (Winchester,) but more commonly from 12 to 15. A good reaper cuts here, from an acre to one and an half acre in the day, and also binds and stooks it himself. This they do, when they use the large sickle; but, when they employ the scythe, they will, each man, cut down from 4 to 6 acres, while another rakes and binds it. All the time of harvest is here a continued feast, on the best of victuals, with not a little whisky

whisky besides. Rye-bread, which you seem to despise in Scotland, has long been in general use here; and the millers are now so expert in manufacturing this grain, that it is hardly to be distinguished from wheat-flower, either as to colour or taste. Wheat is scarce, and the demand for it so great, that the farmers use very little of it in their own families, but send it all away to market, even to the distance sometimes of 100 miles, by land-carriage, in waggons, to Baltimore or other ports. A waggon-load is 12 or 14 barrels; each barrel 196 lib. weight. There is a vast consumpt of pork in this country, and also of beef; and the demand for coffee is astonishing, particularly among the lower ranks."

Letter from a Farmer in Roxburghshire, October 17th.

"Lean cattle, and cattle proper for the stake, are by no means plentiful, and sheep are equally scarce, owing to the uncommon demand lately from the south. The quantities carried southward have been so great, that I am certain we will have no vent, as customary in preceding years, for any part of our fat stock in that quarter; but I don't think we will, for some time, have much to spare. Perhaps, south of Tyne, there is more stock upon the pastures than was ever known at this period of the year.

Our crops are bulky, but the grain cannot be estimated as of superior quality; nor does the crop, upon the whole, appear to exceed an average. Common oats do not meal well. Barley is of inferior quality. Wheat is coarse and unequal in general. Beans and peas appear unproductive. There was a considerable quantity of wheat sown, prior to the rains, which looks well; but some of the Summer fallows remain unsown; and the fields that carried beans, peas, and clover, are still untouched. Our second crop of clover was very heavy, and the grazing fields are more luxuriant at this day than ever remembered.

Turnips have made a great improvement in the two last months, and may be deemed a good current crop. They sell, of course, at low prices. Beef and mutton continue to bring 8d. per lib. Butter, which sold from 13d. to 17d. per lib., is now reduced to 10d.; and cheese has experienced a similar reduction."

Mearns Quarterly Report.

The effect of the July rains was wonderful upon every one of our crops. Oats, when the moist weather commenced, had a most miserable appearance; on thin soils, they scarcely deserved the name of a crop; but, except upon dry gravelly soils, they have proved a crop of great abundance, perhaps exceeding one-fourth of a common average. At the mill, the return may be estimated as equal to meal

meal for corn. In cold upland places, the produce is greater than ever gained.

Barley is also bulky; but, in point of quality, inferior to last year's growth. Upon the coast side, the bolls may be something like an average. In the interior parts, from every information, the quantity will be one-sixth more.

Wheat is our worst crop, having suffered much from smut and mildew. In a few instances, the grain is worth very little. Potatoes are unusually good; and double the extent of land was planted this year than customary.

Hay had the appearance of being a scarce article; and most people were impressed with the idea that prices would run very high; yet, in looking over the country, as many hay-stacks are to be seen as usual, owing partly to the exuberant crop of after-grass, which many farmers cut and stacked. Prices started at 1s.; they are now at 8d. to 9d. per stone.

Markets for grain are very unsteady.—Wheat 25s. to 27s.; barley 18s. to 22s. 6d.; oatmeal, 18s. to 20s. Lean stock was lately sold at extravagant prices; but, as the demand is lessened, a reduction of 10 per cent has taken place.

The reverend Mr Findlater's observations upon the corn laws appear very plausible; but I would wish to see something on the other side of the question. It is the clearest of all propositions, that corn will not be raised, unless the grower is guaranteed in a price equal to the amount of rent, labour, public burdens, and the subsistence of himself and family. Without laying any stress upon rent, which perhaps may be artificially increased by corn laws, the rise in the other articles, within these ten years, has been so enormous, as to call for some fresh regulations respecting the importation of foreign grain. I do not mean to argue against the increase of wages and taxes; perhaps both were expedient and necessary; but certainly fair play ought to be allowed to the grower of corn at home, who should not be exposed to loss, merely because the growers in other countries are not loaded with such heavy burdens.—*18th October.*

Berwickshire Quarterly Report.

Our harvest commenced about the middle of August, and has till within these few days, been favoured with a tract of fine moderate weather, free from rain of any continuance, but greatly deficient of that drying quality, so essential to the preparation of corn for the stack-yard. There has been no damage sustained in the field; but, from the humid temperament of the air, it required more than common attention, to avoid heating in the stack. Harvest was concluded, in the lower district, by the beginning of October:

ber: In Lammermuir, there is still a few oats to get in. Reapers wages were from 1s. 6d. to 2s. per day, with victuals.

The wheat crop was luxuriant, but a good deal of it discoloured by mildew; and the grain of Spring sown fields, in many cases, small and thin. Barley, though a decent crop as to bulk, is in general small, and of a dingy colour. Oats are finer in quality than either wheat or barley, and fully as productive. Peas are a good crop. Beans were luxuriant; but will not yield in proportion to their bulk. The quantity of straw is far beyond what appearances at Midsummer led us to expect; and, upon the whole, the crop of grain may be considered as better than an average one.

Pasturage has been very good during the whole of this quarter; the aftermaths luxuriant; and young clovers every where healthy and vigorous. Potatoes are uncommonly productive. Turnips are thriving, and their aggregate weight will exceed that of ordinary year. The progress of wheat sowing has been retarded by the dashes of rain that have fallen within these ten days; what was sown previous to that period, had every thing in its favour, and has made a fine braird.

The prices of lean stock, during this quarter, have exceeded all precedent. Draught ewes have sold, currently, from 30 to 35 per cent. above last year's value. Since the promulgation of Peace, cattle have rather been on the decline; but, if we may judge from Wooler fair on Saturday last, the sheep market has as yet experienced no material alteration.——*October* 21.

Mid-Lothian Quarterly Report, from August 1st to October 31st, inclusive, 1801.

Never, in recollection, has there been a more favourable season, for the ripening and the ingathering of the fruits of the earth, than the present. The crop, of course, so far as it depended on the weather, has been collected to the homestead, in the very best condition.

Some particular circumstances, however, require to be noticed. Thus, wheat, of which the appearance at one time was uncommonly flattering, has been affected with *smut*, to an extent altogether unprecedented; which, besides reducing the quantity, and hurting the quality in a very perceptible degree, has occasioned, and will continue to occasion, no little trouble and expence in washing it. This disease has happened, more or less, in almost every soil and situation; and, in spite of every previous preparation of the seed, by steeps and pickles, &c. which, in former seasons, were successful, as preventatives. If there is any distinction at all as to its prevalence, it is between the most early sown and the latest; the first being much less affected than the other; and yet none was very late sown last year,

year, as, from the remarkable goodness of the season, the wheat seed was much earlier finished than usual. The *curl*, as formerly noticed, has been very prevalent among the potatoes; and, of course, the crop in general has been far from being productive; but, on the other hand, the quality is, perhaps beyond example, excellent. What may be the *cause* of this defect in the potatoe we are not here agreed in; but our *remedy* is universal, being, change of seed every third year as farthest, from the Muirlands, and which, till now, was attended with success. This year, however, nothing but the *first* year's change did good.

Oats and barley are both good crops; but the bean crop, in many places, did not recover from the blasting effect of the intense drought, in the early part of the season. The peas crop, its companion, is almost every where excellent.

Although turnip is not much cultivated in this county, the crop, however, deserves notice this year, from being so remarkably good; while the unusual product of the second crop of clover, in addition to a fresh, though not bulky, crop of straw, will insure, it is to be hoped, a sufficiency of Winter provender for the cattle.

The operations for a succeeding crop are going on vigorously: wheat-sowing, in particular, is getting forward in the very best style: so that, with the recent return of peace, there is at present every prospect of a continuation of plenty.

Argyleshire Quarterly Report.

From the sowing of the seed, to the close of the Harvest, we have had, in common with the rest of the kingdom, the most genial season ever remembered by the oldest men. The crops, of course, are remarkably abundant, especially those on wet and mossy soils: their growth was not checked by the drought in the beginning of Summer, as was the case on some light and dry grounds, till they were refreshed by seasonable rains in the month of July. The crop of bear is the lightest, and does not, in general, exceed that of ordinary years; though that of oats is computed to be, at an average, nearly one half more. The increase of potatoes, of which more than usual is planted, is equally great. The prices have accordingly fallen, most rapidly, to less than one half of what they were in last Spring. Oat-meal is now at 1s. 4d. the peck of 10 lib.; and potatoes at 6d. the peck of above 50 lib. The high price of whisky (5d. the gill) will probably keep the price of bear higher in proportion than that of other grain. Any of it that has been yet sold, is, however, to be accounted for at the price which it may draw about New-year's day.

Whilst the price of victual is thus fallen, that of cattle has risen higher than was ever known.—Cows from 7l. to 9l.; Wedders from 19s. to 22s. Mutton 5d.; Beef 6d. per lib. English. Butter 13d.; cheese

Cheese 4d. the lib. tron. Few herrings have been caught on the coasts of this county during this season, in comparison of former years; and the accounts from the adventurers to the Northern Isles, are not hitherto very favourable. But, upon the whole, we have all cause to join in the general sentiment of joy and of gratitude to a kind Providence, for the return of peace and plenty on this remarkable year.——20*th October.*

Inverness-shire Quarterly Report.

Our harvest was remarkably quick, the crop being all got safe into the stack-yard before the end of September, without the necessity of opening a single sheaf.

All along the coast, from the severe early drought, the crop will be below an average; but, in the Highland districts, it is above it, and the quality uncommonly fine. Turnips are generally good, and no complaint, as yet, of the *rot* or *burst* among them. Little grain of this crop has hitherto been sold, except barley. Prices from 42s. to 45s. per boll. Potatoes are productive, and sell from 10s. to 12s. per boll of 256 Scottish pints. Hay from 1s. 3d. to 1s. 6d. per stone.

This county is so drained of cattle, that I hardly imagine the fall southwards will have any effect here till the Spring. Beef sells, in Inverness, at 7d. per lib; mutton at 5d. The wheat seed was favoured with equal good weather as the harvest, and no change has yet taken place.——*October* 20.

Letter from Dunkeld, October 22.

'I have the pleasure of saying, that the crop, through Athole, and in the vicinity of this place, is extraordinary fine; and that the harvest was completely finished three weeks ago. The several grains are stacked in excellent condition, and appear very productive. Lean cattle lately brought great prices, but are now selling much lower. Indeed, the happy effects of peace and plenty are conspicuous, all kinds of provisions being declining in price daily.'

Letter from an extensive Farmer in Dumfries-shire, October 22.

'We had an early harvest in this county, and every thing was safely housed or stacked a month ago. The oat-crop, in the lower district, was not heavy; but, upon the colder lands in the inland parts, was very good, and full as early as upon Solway Frith. Barley is not at all so plentiful as usual: Much of the dung having been allotted to the potatoe fields, occasioned less of that grain to be sown. Potatoes are a great crop; but I do not expect any sale, as both poor and rich have them in abundance. I have sown some wheat, which is already covering the clod; but there is not a great quantity sown in this tract. Any turnips that we have,

are looking well; and the second crop of clover grass, from the fineness of the weather, has been well got, and much increased our stock of hay.

The price of common oats, at Carlisle, last week, was 2s. 6d. per Winchester bushel; potatoe oats 3s. to 3s. 4d.; wheat 9s.; barley 5s.; the latter to be shipped for Liverpool.

Our cattle markets are rather at a stand, and prices may be supposed to be reduced, at least, 10 per cent. Irish cattle have been extensively imported. I sold a large parcel of them in Brough-hill fair; where there were plenty of customers, and great prices given. We have large droves of Galloways and Highland bullocks up in Norfolk, for St Faith's Market, which holds this week; but, as yet, no intelligence is received; only I am informed that part of them were sold at the show, before the fair, at good prices; some Galloway heifers as high as 27l. Sterling; and that a tolerable market was expected for the beasts in good condition.

Sheep have advanced in price. Old, or stock ewes, of the Cheviot breed, that were sold last year from 9s. to 10s. per head, have this season drawn 20s. or 22s.; and wool has also sold high; circumstances much in favour of the store farmers. At Dumfries market, last week, Galloway cattle sold for about one pound less than formerly, and Irish cattle about two pounds. Large quantities are on the road for Carlisle market; but, in my opinion, prices, in a few weeks, will be as high as ever, the country being so full of keeping. At Wooler fair, I purchased a lot of ewes, of the Leicester breed, at 55s. per head; the market was high, and every sheep sold. I was also at Mr Culley's, who has hired out many more rams this year than usual; some at fifty guineas for the season; the common rate from 15l. to 20l. Such fields of turnips, as he has, I never saw: and the after grass is immense.

I would recommend to every farmer, who works his thrashing machine with animals, to employ bullocks in preference to horses. I have used them, with great advantage, for two years past; and gained a handsome profit upon them at the end of each season. They are steadier than horses, and not injured by the labour; which is a weighty concern upon a large farm; it being well ascertained, that no branch of work is more hurtful to horses than drawing a threshing machine.'

ENGLAND.

Norfolk Quarterly Report.

We enjoyed an excellent harvest, and experienced little interruption from bad weather; consequently, our corn has been carried in

choice condition. Wheat, in particular, is of superior quality, weighing, upon an average, 60 lib. per bushel; and as more acres were sown than ever were known before, the quantity produced will double that of last year. Rye is good also; but the culture of this grain is annually decreasing in this county. Barley is a partial crop: Upon good soils, where it was early sown, the produce is abundant, and quality fine; but upon hot gravelly lands it proves defective, both in quantity and quality; though, upon the whole, we think it will prove profitable to the consumer. Oats are a great crop; and so are peas and tares. Rape-seed is excellent, and, being remarkably dry, will be productive in oil.

Our markets started high, when the new grain appeared; but a strange alteration has now taken place, and both buyers and sellers appear panic-struck by the peace, which seems to have introduced a new order of things. Our current prices are—Wheat, 58s. to 60s.; rye, 42s. to 44s.; barley, 38s. to 39s.; oats, 22s. to 23s.; white peas, 50s. to 52s.; grey do. 40s. to 42s.; tares, 48s. to 50s.; beans, none yet at market; rape-seed, 40l. to 42l. per last; fine flour, 55s. per sack.——*October* 15.

Letter from a Farmer in Wales, October 15.

'Since I wrote you last, we have had a continuance of favourable weather, and farming has gone on with spirit and pleasure. The hay, early cut, was very light; but owing to the general Summer rains, the late crops were most abundant. This circumstance, joined to the scarcity of cattle, has caused hay to become a mere drug; for the best quality can be purchased at 40s. per ton, which is less than 5d. your stone.

The corn crops had a good appearance from the beginning, and kept in a thriving state through the whole Summer months. Near the sea, harvest commenced before the conclusion of July; and, by the end of August, it was nearly finished. We never had a finer harvest; not a single shower for five weeks; of course, our grain is excellent, though there is a general complaint of the prevalence of smut upon the wheat, which occasions clean samples for seed to sell at high prices. Barley is a bulky crop; and those who have thrashed, say it yields well in the barn; but, from the scarcity of seed, less was sown than customary. Oats are good, both in respect of quantity and quality. As for beans and peas, none are yet thrashed; but, from the appearance at harvest, we expect them to be very productive. Turnips are good, where they were sown in time; and apples and pears are very plentiful. Prices of grain keep high. Wheat, 92s. to 96s. per quarter, Winchester; fine samples for seed, 108s.; barley, 48s. to 52s.; oats, 25s. to 26s.; potatoes, per peck of 40 lib.

1s. 6d ; butcher-meat, 7d. to 9d. per lib. ; wool, 21s. to 28s. per stone of 21 lib.

Cattle have been on the advance for several months, which has occasioned this country to be nearly drained. Lean oxen from the yoke, that will not weigh above *forty scores* when fat, have sold at 20l. ; and young heifers and steers much higher in proportion. If the purchasers are paid for fattening them, butcher-meat must be immensely high next Spring. A change has, however, taken place within these eight days. At Carphilly fair, last Thursday, not one Englishman ppeared ; and at Cardriff, on Saturday, the whole pig-drovers absented themselves. The cause of this demur is attributed to the peace ; however, we have very little stock to dispose of.

The sowing of wheat is far advanced, and the early sown fields look charmingly. For eight days past, we have had showery weather, which has wetted the fallows ; but the clover stubbles are working well.

In the year 1798, I fallowed a field of seven acres of clay-land, the greatest part of which was completely limed, the remainder dunged, and the whole sown with wheat. The crop in 1799 was equally good over the whole ; and, after three ploughings, barley, with grass seeds, was sown in 1800, which, from the dryness of the Summer, was thin and weak. In the month of September, after the barley was removed, the clover made a vigorous appearance, accompanied, *on the limed part*, by a thick braird of corn, which I supposed to be barley from seed shed at harvest ; but, to my surprise, it stood the winter without injury, and proved to be wheat. As it got into ear about the end of May, I allowed two acres to stand uncut till the wheat was fully ripe ; upon which, I had a large half crop of grain, and a great bulk of clover. There was no appearance of wheat among the barley crop ; and, on the part of the field not limed, though the clover was equally good, yet no stalks of grain were to be seen. I therefore attribute the uncommon circumstance of wheat, lying dormant in the ground for a season, notwithstanding the ground was thrice ploughed, entirely to the effects of the lime administered to the Summer fallow. The fact warrants this conclusion : And though it may be difficult to support an hypothesis upon mere theoretical principles ; yet, as the grain must have lain in the ground for two years, and none was observed in the unlimed part, its safety undoubtedly proceeded from the lime.

Lincolnshire Quarterly Report.

The several crops of this county, upon a fair estimation, are fully as good as ever remembered ; and our markets keep lowering very much. The wheats yield from 3 to 4 quarters per acre, and will

will weigh 63 lib. per bushel. Of barley, little is thrashed; but the return will be from 3 to 5 quarters per acre. Oats, in the fens, are good, and will produce 8 quarters per acre; upon the high grounds, about 6 quarters. Beans about 3 quarters; and potatoes from 700 to 1000 pecks. Turnips are extremely good. It is unnecessary to quote prices; for they vary so much, from week to week, that a return of their present rates can be of no service to you.

Sheep sell at exorbitant prices. *Drape ewes*, from 40s. to 55s. Shearling wedders, from 55s. to 65s. Lambs, 34s. to 44s. per head; the whole of which are an unfattened kind of meat. Retail prices are from 7d. to 8d. Whether or not the calling in of the government contracts will lower the butcher market, a few weeks will discover. If peace had not been concluded, it is probable a further advance would have taken place.

We have not much wheat sown yet, but most people are begun. I have often suffered by early sowing, as the land cements, and, of course, weeds take a stronger root, than when the land is harrowed later in the season.——*October* 18.

Yorkshire Quarterly Report.

After a long period of unparalleled trial and distress to the general mass of consumers in this island, it must be particularly cheering to them, and to the humanity of all orders of men, to contemplate the auspicious tokens of peace and plenty, which may be safely announced in the present autumnal reports on the state of rural economy through the country, with perhaps fewer exceptions than usual. It may also be hoped, that the obloquy cast on such reports, by ignorance or inconsideration, as if the faithful detail of symptoms of scarcity, when actually existing, tended to increase dearth, will be found unmerited, at least, those who entertain such ideas, must allow that the reports will now have the opposite tendency, of increasing cheapness, by announcing plenty.

Wheat and barley, in general, have been as well harvested as ever known; yet some loss has occurred, from stacking too hastily, and from want of time, or neglect of thatching, and properly securing the corn from the very heavy rains which ensued. A considerable quantity of the late ripened oats has been damaged by the frequent rains Beans, peas, and the second crop of clover, have had a very unfavourable harvesting season. Wheat and oats are full crops; barley a good average one; and beans and peas better than several years past. The prices of all, except barley, are much reduced. Barley is likely to be the highest, in relative proportion, because less of that grain was sown than usual. Potatoes are uncommonly good and abundant, and at the lowest prices ever known.

There has been too much rain for the pastures; but the fog, or after-grass, and the turnips, on rich dry soils, are very luxuriant; yet, the turnips have suffered, in a considerable degree, from the drought of part of the growing season, and the depredations of the grub; so that they are fast changing their healthy hue, to a sickly brown, or yellow. They are a much better crop than last year, but do not sell at half the price.

The Summer fallows, on many lands, are very foul; an instance of shameful neglect and procrastination; as very good opportunities, of completely dressing them, were repeatedly afforded during the course of the Summer. Some of these fallows have been sown with wheat: the stiffer soils are wet, and seed-work is generally in a backward state.

Our live stock, of all sorts, has experienced a very sudden depression, in consequence of the peace. Before that welcome event, there was every appearance of scarcity; whether they will recover their late very high prices, a little time will determine. As these articles are always affected, more or less, by stoppages of contracts, &c., (which, of course, are only temporary,) and as there is obviously more feed than stock, there is some reason to think, that the demand for butcher-meat may eventually prove fully adequate to any supply that can be within reach of the country for some time to come; more especially, if the industry of the lower ranks should be encouraged by tolerable prices of labour, and cheapness of grain. Fat cattle have fallen in price, but not materially. The rot in sheep is much dreaded.——*October* 18.

Northumberland Quarterly Report.

From the 20th July to the 9th October, the weather has been uncommonly fine and favourable for harvesting both hay and corn crops; the two last days of July, and the first of August, with a few days in September, being the only moist or wet days that have happened, and which were so moderate, as only to interrupt the farmer's progress, but did not in the least injure the crops. There are a few instances of oats being brought in too hastily, and heated; but, in general, the white corn has been got dry, and in good condition, as were also a great part of the beans and peas. A few beans are yet out, which will probably be injured by the rains of last week, which still continue.

Wheat had the appearance of being a very abundant crop; but it received considerable injury by the wet close weather, from the beginning to the middle of July, a great number of grains being shrunk, and not so perfect, plump, and bright as they ought to be; which is probably owing to the straw turning cankered or rusted, after the close wet weather, and also a kind of mildew that affected the

the ears. On some light soils, there was also a good deal of smutted wheat, which, on pulling up several of the stems, proved *diseased at the root*; a circumstance I do not recollect having observed in smutted stems of wheat before.

Barley is the most general good crop throughout this district, and mostly well harvested; but the grain appears not so fine as we commonly have it.

Oats, upon dry soils, were injured by the drought, and on such are a light crop; but upon the moister lands, and moory situations, this defect is amply compensated.

Peas and Beans, after the rains in July, run so much to straw, that they had every appearance of being very unproductive; but the fine dry weather, in August and September, caused them to fill much better than was expected; and, on the whole, I hope they will turn out a medium crop.

Potatoes were thought to be greatly injured by the frost in June; but it has turned out quite otherwise, as they were never known more abundant, and of a better quality.

Turnips are, in general, good; on some very dry lands, they were beginning to mildew, but the late rains will prevent its increase.

In travelling through the country, the stack-yards appear all well filled, and the crop above an average one; from which we may hope, the price of grain will once more come within the bounds of moderation.

Live stock has been increasing in price from week to week; but the news of peace seems to have checked its progress, and turned the tide, as prices have lowered a little since, though not much. At Whittingham and St Ninian's fairs, lean cattle were sold at such prices, that, if they had been killed immediately, would have come to 10s. per stone (of 14 lib.) sink; while fat cattle could not be sold for 9s. Draft ewes, of the long-wooled kind, which, when fattened on turnips, will not weigh more than 18 lib. a quarter, were sold for 44s. and 46. a piece; and shearling wethers, that will not weigh above 20 lib. a quarter, when fattened on turnips, have been sold for 52s. Pigs, two months old, at 20s. At what price must butcher's meat be sold, next Summer, to repay the feeders? At Wooler fair yesterday, contrary to expectation, the prices of cattle were not reduced.——18*th October.*

Letter from a Gentleman in Norfolk, October 18.

'After the finest and most forward harvest almost ever known, it appears a general sentiment among the first farmers, that wheat is a much more productive crop, and of far better quality, than last year: that peas, of which I need not say many are here grown, are much better podded; and oats better corned: but barley, the

essential, the staple article of this country, is by no means either so productive a crop, or so fine in quality, as it was last year, where well harvested. Turnips, a fair average crop, only appearing to tend too much towards a mildew. Grasses, never better at this season of the year.

The prices of fat stock, being here invariably ruled by Smithfield market, to which every superabundance is always regularly sent, I think needless to quote them; and I feel it out of my power to give correct information relative to the market for lean cattle, until the termination of St Faith's fair, held at Norwich the whole of next week; the state of prices there generally ruling the county for the following Winter. The common expectation, however, is, that peace must have its effect in lowering prices considerably.

The South Down breed of sheep is very rapidly making its way here, in preference to the Leicester, and promising soon the total extinction of the horned Norfolk greyhounds, so long a disgrace to the county. As for cattle, *your Fifeshire, and other Scots, are all the rage.*'

Letter from Ripon, (Yorkshire), October 19.

'I perused your last Number with pleasure; and hope the work will be attended with benefit to the cause of Agriculture. The remarks of a gentleman, who writes you from the vicinity of Edinburgh, page 354, respecting the turnips grown here, are not altogether correct. He says, we cultivate them according to the broadcast fashion; but, in justice to this neighbourhood, you will permit me to say, that, in this assertion, he is greatly mistaken: All the turnips which he could see near Ripon, with hardly one exception, are sown by a drill machine, fixed to the plough, which sows the seed at the time the land is ploughed, at the rate of from half a pound to a pound per English acre, at the pleasure of the farmer; and, as the seed is deposited in the ground when the moisture is fresh, a braird can thereby be obtained in the driest season; a circumstance often difficult to be procured in the broadcast way. This mode of sowing turnips is now become general through Yorkshire. And, as the interval is about 12 inches, handhoeing may be given, so often as circumstances require. If your correspondent had taken the trouble to examine the fields, he would at once have been convinced, that they were not sown broadcast; though, I acknowledge, that, in riding the road, a person is easily deceived; and, if he was here now, he would be satisfied, that we are not inferior, in the cultivation of turnips, to the farmers of any country whatever.

The weather, in harvest, was very good; but the sowing of wheat has lately been much obstructed, by heavy rains. The quantity of potatoes is immense with us this season.'

Letter

Letter from a Gentleman in London, October 20th.

Having made the most particular inquiries among farmers and ers for some time past, I am enabled to say, that the crop, in counties adjacent to the metropolis, is, upon the whole, as good that of 1798, especially in the articles of wheat and oats. The t new wheat will weigh from 60 to 63 lib. per bushel; barley to 52 lib.; oats 38 to 43 lib. From contrary winds, and stormy ather, we had few arrivals last week, and, in consequence, a ort supply of new grain appeared at market, which caused an rance upon wheat; but, upon the whole, so far as the season has ne, Marklane has been well supplied, and the county markets Essex and Middlesex, for several weeks, have been very full. Uxbridge market, where the grain is pitched in bulk, as at ddington, there were two thousand quarters of wheat presented the week before last. The chief quantity of new oats yet of- ed for sale in Marklane, has been from Scotland, and some of m were very fine. New barley is good in quality, and has sold reduced prices for two weeks past. New peas and beans are also y fine, but rather soft, and come slowly to market. Smithfield been pretty well supplied with cattle and sheep; and prices ve felt little alteration in consequence of peace being settled, ugh a fall is expected. Good sheep are a scarce article.

Present State of the Markets.

New English wheat	-	56s. to 67s. *p.* quarter.
Barley - -	-	32s. to 43s. *p.* do.
Feed oats -	- -	22s. to 26s. *p.* do.
Poland do. -	- -	30s. to 36s. *p.* do.
Fine old Essex do.	-	38s. to 40s. *p.* do.
New tick beans	- -	38s. to 40s. *p.* do.
Small do. -	- -	42s. to 44s. *p.* do.
New hog peas	- -	42s. to 46s. *p.* do.
Fine pale malt	- -	60s. to 72s. *p.* do.
Household flour	- -	60s. to 65s. *p.* sack.
Potatoes, from	- -	50s. to 60s. *p.* ton.
Beef, wholesale -	4s. 6d. to 5s 4d. *p.* stone of 8 lib.	
Mutton, do. -	4s. to 5s. 6d. *p.* do.	
Retail prices of both, from 8d. to 9½d. *p.* lib.		
Hay, 4l. to 5l. 5s. *p.* load.		

OBITUARY.

Obituary.

Died, on August 4th, at Aidlethen, near Ellon, in the 89th year of his age, Mr John Garland, formerly farmer at Cairntown, in the Mearns.

At Redbourn, Lincolnshire, Mr Thomas Sherlock, an eminent farmer and grazier.

On his return home from Stockwith fair, Mr R. Clarke farmer at Butterwick, near Gainsborough. He was robbed and murdered upon the road, and his body thrown into the river.

Mr Locke of Kempsey, near Worcester. He went out in the morning to course in perfect health, and suddenly dropped down dead in the field.

At Landport, near Lewes, Mr J. Touale, a capital farmer, said to be worth between 2 and 300,000l.

Notes to Correspondents.

Our best thanks are offered to the learned Gentleman, who has obligingly sent us a comprehensive *Review of the Mid-Lothian Agricultural Survey*. That survey has always been valued, by impartial people, as a first-rate performance; and we judge, that the review given of it, will rank equally high in the scale of public estimation. This we reserve for next volume, as there will be a necessity of dividing it, in order that the usual variety may be presented.

It having been suggested by several of our correspondents, that the *Corn Laws* required amendment, we embrace this opportunity of acquainting them, that, in the next Number, will be given strictures upon that important branch of police, by a Gentleman who has attentively considered and investigated the subject.

The *Extracts*, promised in our last, from an *Essay, sent to the Board of Agriculture, upon the question of breaking up Grass Land*, are necessarily delayed, the essay being still in the hands of the Board.

The Reports for Caithness, Tweedale, Lanark, and several articles of Intelligence, were too late of coming to hand.

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